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Connecticut Medicine

The Journal of the Connecticut State Medical Society

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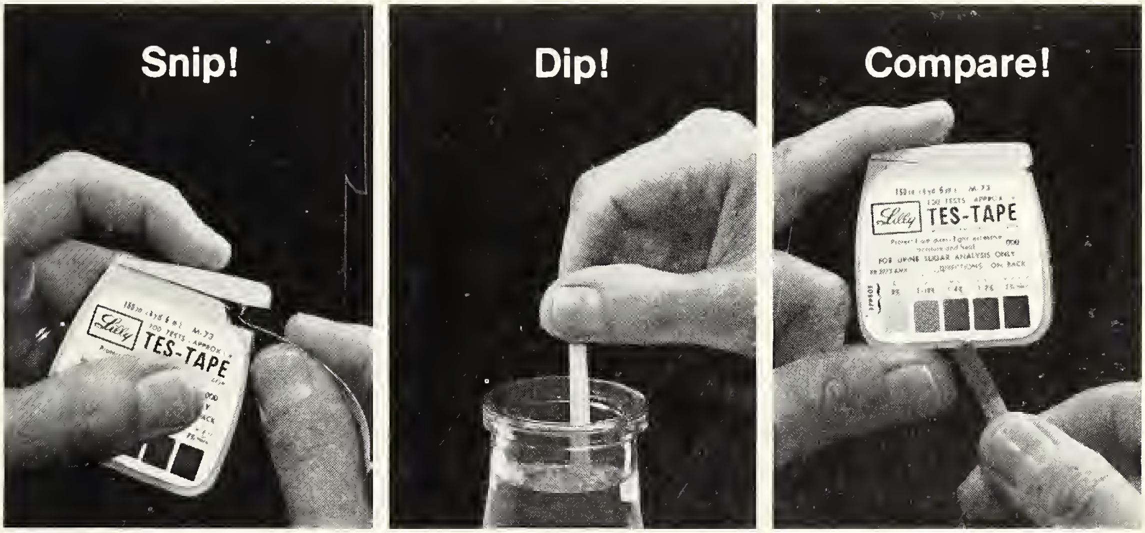

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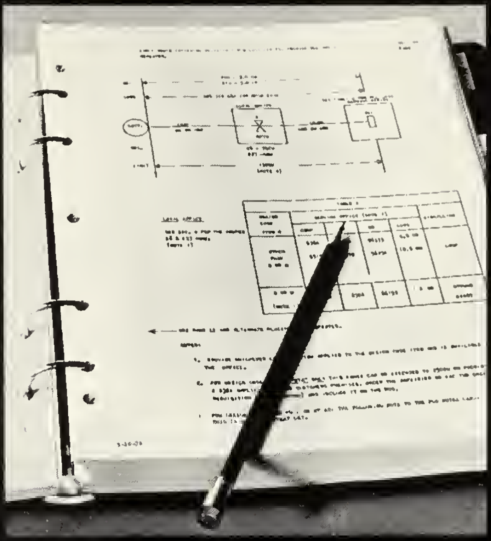

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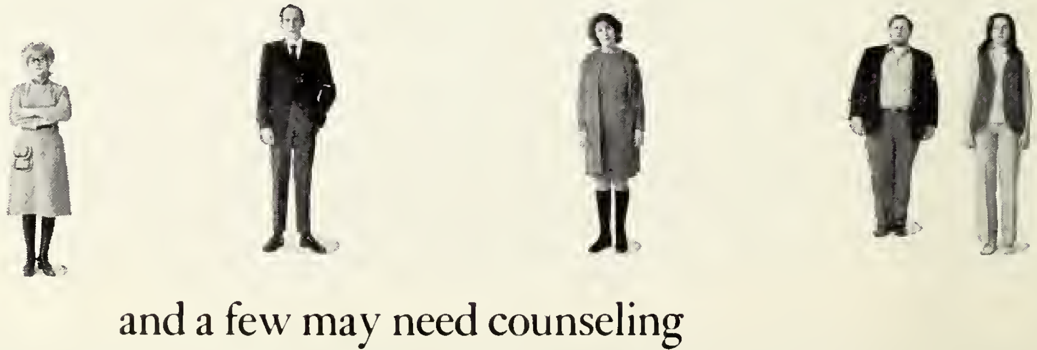

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Southern Connecticut Association for Blood

In the fall of 1972 a group of about 10 clinical hematologists from several cities in southern Connecticut met in New Haven at the Yale-New Haven Medical Center. The purpose of the meeting was to determine the feasibility of organizing an inter-city group that could conduct cooperative clinical research in the field of hematology. A favorable response was obtained. Several subsequent meetings resulted in naming the organization the Southern Connecticut Association for Blood (SCAB). The following slate of officers was selected: President, Pasquale E. Perillie; Vice-President, Robert Burd; Secretary, Victor Grann; Treasurer, George Robitaille; Research Committee for two years, Arthur Rosenberg, Oswaldo Castro; Research Committee for one year, Paul Schulman, William Covey.

It was decided that there should be three or four meetings a year and that most of them should be expressly devoted to the organization and summarization of clinical research projects. Some of the earlier meetings generated a number of potential research projects. These were discussed by the Organization's Committee on Clinical Investigation and four projects were selected. A senior investigator was appointed for each project. He developed the research protocol and distributed it to each of the members of SCAB. The clinical information was collected in a uniform fashion and then was summarized by the senior investigator. At a subsequent meeting of SCAB the results of the clinical study were reported to the membership and the feasibility of publication was discussed. Two clinical projects were completed and both now have been accepted for publication in major clinical journals. In each instance there has been multiple authorship involving those who contributed to the research. One of the projects was reported at the annual meeting of the American College of Physicians.

The first project concerned the results of treatment of chronic refractory idiopathic thrombocytopenic purpura. An analysis was made of 15 patients treated at several medical centers in Connecticut along with approximately 100 patients which had been previously reported in the medical literature. The second report involved the results of therapy of patients over the age of 50 years with acute leukemia. The general impression in the past has been that the results of therapy in this age group have been distinctly poorer than in the younger age group. The general conclusion was that the overall treatment results in this group were excellent and were comparable to those of younger age groups. Furthermore, it was determined that remission and mortality rates at community hospitals where there was a hematologist and house staff was comparable to that of two large university medical centers.

Progress with SCAB up to the present time has been eminently satisfactory. The organization has brought together a group of physicians with similar interests into an exciting program of clinical research. The program is highly educational and is making a substantial contribution toward improved medical care. The two projects pending are a study of megaloblastic anemias and evaluation of the morbidity and mortality associated with pregnancy in sickle cell disease.

The last meeting of the academic year was held in June of 1973. It was an all day clinical program held in the Fitkin Amphitheatre at Yale-New Haven Medical Center. A series of 10 clinical papers was presented by various members of SCAB. The guest hematologist was Dr. Robert Weed who is Professor of Medicine and Chief of the Hematology Section of the University of Rochester School of Medicine and Dentistry. Each paper was discussed by both the presenter and Dr. Weed. The last paper on the program was a presentation by Dr. Weed of the application of electron microscopy to clinical hematology.

This issue of *Connecticut Medicine* is devoted in part to selected papers taken from the 1st Annual Symposium of SCAB. The discussions also are included. The members of SCAB hope that you will enjoy reading these reports.

Stuart C. Finch, M.D.
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Pasquale E. Perillie, M.D.
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The Development of a Heterologous Transfusion Technique: Application to Sickle Cell Disease

Stuart C. Finch, M.D., Oswaldo Castro, M.D. Jerome Orlin
Michael W. Rosen, M.D. and Leonardo Aponte, M.D.

The first recorded human blood transfusion occurred in 1667 and consisted of the intravenous administration of about 10 ounces of sheep's blood to a 22 year old man.[1]. He apparently survived, but shortly thereafter adverse reactions and several deaths following heterologous blood transfusions to others resulted in virtually complete cessation of this procedure for about one and a half centuries. Although several eminent physicians deprecated heterologous transfusions as extremely dangerous, as late as 1874 Hasse in Germany performed 15 sheep to man transfusions of about 150 ml each. A typical reaction consisted of dyspnea, malaise, convulsions, unconsciousness and even sudden death. If the patient lived, his urine became bloody and he eventually became jaundiced. Soon the dangers of this practice were recognized and heterologous transfusions were abandoned, but it was not until the early 20th century that the role of natural heterologous antibodies and hemolysins in the pathogenesis of blood destruction was appreciated. Recognition of these factors has precluded the use of heterologous transfusions for either the study of erythrocyte survival or for blood replacement up to the present time.

Several years ago we began to explore the possibility that significant survival of heterologous erythrocytes might be achieved if intravascular hemolysis could be inactivated and the reticuloendothelial system (RES) could be blocked in order to impede the removal from circulation of the transfused erythrocytes even if they became coated with antibodies. The feasibility of such an approach was enhanced through appreciation of two major discoveries of pertinence to this problem. First was the observation by A.E. Stuart in Edinburgh in 1960 that a single injection of a colloidal suspension of ethyl palmitate (EP) to mice produces RES blockade and acute splenic necrosis.[2] A number of subsequent studies demonstrated that a variety of other fatty acid esters such as ethyl stearate, methyl palmitate and cholesterol oleate produce some RES blockade for periods as long as 17 days following a single injection.[3-6] Studies in our laboratory have shown that either ethyl or methyl palmitate are potent RES blocking agents in a variety of small animal species, but that EP is a better agent for the production of acute splenic necrosis.[7] Studies with ^{14}C tagged EP indicated that from 7-10% of the intravenously injected dose of EP is trapped in the spleen and remains there for 5 to 7 days.[8] Repeated injections of EP produced permanent atrophy and functional impairment of the spleen.[9] Rats infected with *Hemobartonella muris* rapidly developed systemic infection and hemolytic anemia following a single EP injection.[10] In 1964 and 1965 it was shown by two groups of investigators that EP treatment of mice resulted in significant improvement of heterologous erythrocyte survival.[11-13] The T-1/2 for the EP animals was 3 to 6 hours in comparison to 16 to 50 minutes for the uninjected controls.

The second major discovery of significance was the isolation by R.A. Nelson, Jr. and his associates of a cobra venom factor (CVF) which specifically binds and inactivates the third component of complement (C3).[14] This material is not toxic in small animals and inactivates C3 for 3 to 4 days following the intravenous injection of a single dose.[15] In 1970 we initiated experiments in rats for the study of human erythrocyte survival following injection of both EP and CVF in order to block the RES, produce acute splenic necrosis and inactivate C3. These studies demonstrated a prolongation of the T-1/2 survival from an average of 6 minutes in control rats to periods of as long as 8 to 12 hours in the treated rats.[16] The use of either CVF or EP alone resulted in prolongation of the T-1/2 survival to periods of only 1 to 2 hours. Further improvement in technique now has resulted in average T-1/2 survival periods of about 31 hours for human red cells in rats[17] (Figure 1). The longest T-1/2 survival

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DR. STUART C. FINCH, Professor of Medicine; DR. OSWALDO CASTRO, Assistant Professor of Medicine; JEROME ORLIN, Medical Student; DR. MICHAEL W. ROSEN, Fellow in Hematology and DR. LEONARDO APONTE, Resident; Department of Nuclear Medicine, all of the Yale University School of Medicine, New Haven, Conn.

This research was supported by U.S. Public Health Service Training Grant No. HL 05316-13 and U.S. Public Health Service Research Grant No. CA 11106-10.

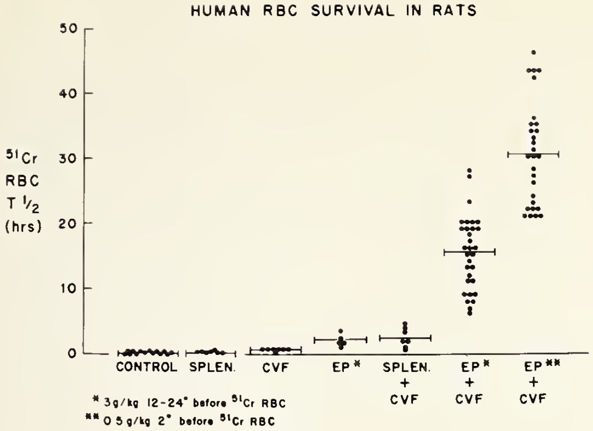

Figure 1

Survival of human erythrocytes transfused into rats. The human donors were apparently healthy volunteers without erythrocyte abnormalities. The synergistic effect of the combination of CVF and EP is manifested by the marked prolongation of the ^{51}Cr human erythrocyte T-1/2 in the animals' circulation.

has been 46 hours. The ^{51}Cr erythrocyte survival in these animals has been exponential with first order kinetics in most instances.

The human erythrocyte survival studies have been conducted in male Sprague-Dawley rats. Most of our studies have involved the intravenous injection of 3 gm of EP per kg the day prior to study followed by the intravenous injection of 20 units of CVF about 30 minutes before IV injection of the ^{51}Cl labeled human red cells.[18] Tail blood samples were collected at intervals of 15 minutes to several hours in a 10 μl capillary pipette for radioassay. The radioactive counts for each sample were expressed as the percent of the 15 minute post transfusion value. Each of these percentages then was plotted on semilogarithmic paper against time in order to calculate the T-1/2 survival for each experiment. The control T-1/2 range was 12 to 20 hours. The method now has been modified so that 500 mg of EP per kg and 10 units of CVF both are given simultaneously about 2 hours prior to injection of the tagged red cells.[17] Control T-1/2 survival values now range from 21 to 46 hours (Figure 1).

The rat model was thought to be particularly suitable for the study of sickle cell anemia. Studies on a group of patients with homozygous sickle cell disease indicate that sickle erythrocytes (Hb SS RBCs) have a significantly shortened T-1/2 survival in room air (Table 1). Exposure of the injected animals to 100% O_2 results in greatly improved survival of the transfused sickle cells, but subsequent change of the atmosphere to 10% O_2 results in the precipitous loss from circulation of 30 to 60% of the Hb SS RBCs[18 19] (Table 1). Continuation of the hypoxic stimulus results in a return to the disappearance slope of the pre-hypoxic animal. These studies strongly suggest that sickle cell erythrocytes are heterogenous in respect to their response to hypoxia in the rat model. One population of erythrocytes appears to be exquisitely sensitive to hypoxia whereas another population seems to be relatively unaffected. Sickle thalassemia and sickle C erythrocytes show an intermediate survival in room air with a much less dramatic response to hypoxia (Table 1). Heterozygous or sickle cell trait erythrocytes now are under intensive study and the data is much too preliminary to make any broad generalizations. The most consistent observation with heterozygous sickle erythrocytes is a moderate shortening of survival in room air.

A subject of importance and particular interest has been that of possible prevention of sickle cell crises in humans following carbamylation of Hb SS RBCs with sodium cyanate. Cyanate treatment of Hb SS RBCs inhibits sickling *in vitro*,[20] increases their *in vivo* survival in man,[21–23] but probably does not prevent the occurrence of sickle cell crises.[24] This experience in man is very similar to our results with human sickle cells in the rat model: Carbamylated Hb SS RBCs in our EP and CVF treated rats consistently show an improved intravascular survival, and in some instances red cell survival is prolonged to the control range. It has been noted, however, that cyanate treated Hb SS RBCs are just as susceptible to removal from circulation in the presence of 10% O_2 as are the noncarbamylated Hb SS RBCs.[25]

Our most recent studies concern the ability of ^{51}Cr Hb SS RBCs to return to circulation after they have been trapped in small vessels during varying periods of hypoxia (10% O_2). Preliminary data indicate that virtually all of the trapped cells will return to circulation if the period of hypoxia is one hour or less.

Results of experiments to date greatly strengthen the feasibility of doing practical studies of erythrocyte survival in animals under a variety of circumstances. It is hoped that this new technique will contribute greatly to our understanding of sickle cell disease and its therapy. Furthermore, we hope there is a possibility of studying the survival characteristics of any human erythrocyte population which has an intracorpuscular defect. Plans now are underway for an evaluation of human glucose-6-phosphate dehydrogenase deficient erythrocytes in rats which are challenged with various drugs. Preliminary studies indicate that the model is sensitive to hereditary spherocytosis erythrocytes. It also seems quite possible that this technique might be applied to problems of blood storage. It is fully appreciated that it is not possible to extrapolate directly from rat to man, but it seems quite pos-

Table 1. Human Sickle Erythrocyte Survival in EP and CVF Treated Rats

				Hgb S	Hgb F	^{51}Cr RBC Survival T-1/2 in Hours			Percent loss RBC with hypoxia*		
Pt.	Age	Sex	Hgb Class.	%	%	# Studies	Mean	Range	# Studies	Mean	Range
S.B.	22	F	SS	87.5	10.5	5	3.3	2.5-3.9	6	52	31-63
O.B.	28	F	SS	95.9	3.1	4	3.3	2.5-4.2	1	35	-
M.C.	16	F	SS	88.6	8.2	6	3.3	2.0-4.5	2	28	0-55
S.E.	23	F	SS	92.9	5.5	9	2.7	1.2-4.5	6	55	45-65
J.G.	33	F	SS	93.4	3.7	8	2.0	1.2-4.5	4	51	45-61
E.M.	6	F	SS	85.0	15.0	5	7.0	2.0-10.0	3	40	35-45
S.M.	25	F	SS	93.0	5.3	10	2.8	1.5-4.1	1	41	-
S.T.	5	M	SS	90.8	9.2	5	3.6	2.0-4.0	4	37	30-43
V.J.	16	M	SS	84.0	16.0	4	2.5	2.0-5.0	1	43	-
D.P.	1	F	SS	89.0	11.0	3	3.0	1.8-6.5	2	50	42-58
S.B.	21	F	S-Thal	76.5	7.2	2	11.1	10.5-11.8	1	20	-
A.D.	52	F	S-Thal	88.1	10.1	3	8.3	6.2-10.5	3	0	0-0
B.T.	1	M	S-Thal	90.6	9.4	3	13.3	12.0-14.0	2	15	0-30
M.B.	60	F	SC	63.6	1.3	3	5.2	5.0-5.8	3	20	0-59
Controls	--	--	AA	--	--	31	15.4	7.0-23.5	10	0	0-0

* This refers to the % of human RBC which are lost from circulation within 30-60 minutes following exposure of the rat to 7-10% oxygen.

sible that we shall gain additional insights concerning human erythrocytic diseases as determined in the animal model.

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DISCUSSION

Dr. Weed's Comments on Dr. Finch's Paper*

This presentation was most interesting. The prospect of manipulating pathologic human cells and studying their behavior in an animal in ways that cannot be done in man is very exciting. Because of my own conviction of the importance of erythrocyte morphology, I am curious to know whether or not there are progressive morphologic changes in the transfused cells during their survival period in the rat. For example, it would be nice if one can observe progressive spherocytic change as evidence of immune destruction. My second question relates to the fact that several workers have suggested progressive fragmentation of sickle cells, within the circulation, as a major cause of their demise. Do you think this would be studied in the rat?

Dr. Finch: Dr. Weed has asked some very important questions for which I do not have the answers. We have not conducted morphologic studies on the transfused cells in any systematic way. Sporadic checks of dry and wet blood preparations have not shown any progressive cell or membrane changes in the donor cells. I suspect that we will find evidence of fragmentation and sphering if we look hard enough.

Dr. Howard Pearson:** What is the mechanism of erythrocyte destruction and removal in your rat model if complement is inactiviated and the RES is blocked?

Dr. Finch: The RES of the rat is only partially blocked by the ethyl palmitate. The transfused red cells become antibody coated and are gradually removed from circulation by the functionally active reticulo-endothelial cells. A second factor of minor importance is the fact that the MCV of the rat is about 70 which suggests that capillary diameters may be a little smaller than mans'. This may have some influence on small vessel trapping of the transfused cells. We might do better with some other animal species.

Physician: How completely carbamylated are the sickle cells which you transfused into the rats?

Dr. Finch: Our red cells were collected and carbamylated in ACD. The fact that this is an acid solution resulted in the carbamylation of many amino acids on the hemoglobin molecule. Our studies show 18 residues per mole of hemoglobin. Dr. Anthony Cerami is now in the process of determining the extent of carbamylation of the terminal N amino group of the hemoglobin molecule. We believe that the extent of specific amino terminal valine carbamylation was in the range of 2 to 3 cyanate residues per mole of hemoglobin tetramer for these studies, however.

---

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**DR. HOWARD PEARSON is Professor of Pediatrics and Chief of Pediatric Hematology at Yale.

Hairy Cell Leukemia: A Case Report

Nathan H. Friedman, M.D. and William G. Covey, M.D.

This 72-year-old white lady (E.C., Bridgeport Hospital No. U050096) presented with a four month history of easy fatigability, a twenty pound weight loss and gross splenomegaly.

Twelve years earlier she had undergone resection of a liposarcoma of the latissimus dorsi followed by a single injection of nitrogen mustard. Two years previously, at the time of uneventful varicose vein ligation, a preliminary white blood count was 13,100 per cu. mm. with 55% "lymphocytes".

In addition to the spleen which descended deep into the left lower quadrant the liver extended three centimeters below the costal margin. A 1½ centimeter lymph node was palpated in the left axilla and smaller nodes in each inguinal region. The hematocrit was 39.7%, hemoglobin 12.7 gms.%, platelets 130,000 per cu. mm. and the white blood count was 49,500 with 88% "lymphocytes". On subsequent review it became apparent that these cells were larger than usual mature lymphocytes and displayed an irregular, serrated border. (See discussion below).

The bone marrow was replaced by sheets of such cells. The protein electrophoresis, immunophoresis, calcium and phosphorus were normal; Coombs test negative; uric acid elevated to 9.7gms.%. Serum lysozyme was 17 mcg per cu. mm. (normal 7-15).

With an initial impression of chronic lymphatic leukemia she was given 200 rads to the spleen with shrinkage to within four centimeters of the costal margin accompanied by a leukopenia of 3400 per cu. mm. and thrombocytopenia of 32,000 per cu. mm. Following recovery she received chlorambucil and later prednisone with no retardation of progressive splenomegaly.

Eleven months later she was readmitted with severe flank hemorrhage and a platelet count of 30,000 per cu. mm. Her white blood count was 20,900 per cu. mm. with 90% abnormal cells. Intense tartrate-resistant acid phosphatase activity was demonstrated in the peripheral blood mononuclear cells by Lung T. Yam, M.D. of the Scripps Clinic. After preparation with platelet transfusion and steroids the patient underwent resection of a 3400 gram spleen. The architecture of this organ was essentially destroyed by a monotonous proliferation of mature lymphoid cells.

Since post-operative recovery (eight months) she has been maintained on low doses of prednisone and has enjoyed relative well-being. Platelet counts have been in excess of 50,000 per cu. mm. and there has been no significant bleeding.

The term "leukemia" refers to disorders of abnormal proliferation and release of leukocytes of the bone marrow and lymphoreticular tissues with large numbers of mature or immature cells accumulating in circulating blood and tissue infiltrates. Leukemia has been classified into the acute and chronic varieties and further subdivided into granulocytic, monocytic and lymphocytic types.

Other non-hemopoietic cells of the bone marrow on rare occasions become infiltrative giving rise to such unusual leukemias as plasma cell leukemia, lymphosarcoma cell leukemia and mast cell leukemia. A recently rediscovered member of this family, accounting for 2 per cent of all leukemias,[1] is hairy cell leukemia or leukemic reticuloendotheliosis. This entity was identified by Ewald in 1923[2] and further reviewed by Gosselin,[2] Bouroncle,[1] James,[4] and Lee.[5]

Most patients are over thirty years of age, and there is a male preponderance of four to one. Presenting findings are in no way specific. They include insidious weakness, fatigue and infrequently such constitutional symptoms as weight loss, anorexia and fever. More commonly initial complaints are a consequence of thrombocytopenic bleeding or splenomegaly: abdominal fullness, perisplenitis, splenic infarction.

Virtually all patients have enlarged spleens, and this is the only physical abnormality in about one-third.[1] The spleen may grow to massive proportions approaching 4000 grams.[6] Modest hepatomegaly is frequently present (60%) and less frequently peripheral adenopathy (35%)[1] and skin infiltrates (12%).[3] At autopsy any organ with a reticuloendothelial component may show infiltration.[1]

Thrombocytopenia is common with values less than 100,000 platelets per cu. mm. in one-half of the new patients. Most patients will have an absolute neutropenia with 60% demonstrating a white blood count of less than 5000 per cu. mm. including up to 95% abnormal cells. An exceptional patient will have a white blood count in excess of 100,000 per cu. mm.[1]

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Anemia, which appears to reflect both myelophthisis and hypersplenism, is rarely severe with most newly diagnosed patients having greater than nine grams per cent hemoglobin.

The bone marrow is customarily difficult to aspirate. A trephine specimen is almost always necessary to reveal the malignant infiltrate which occupies 30% or more of the cellular elements of the marrow.

The unifying feature of hairy cell leukemia is the malignant cell in peripheral blood and tissues. This cell superficially resembles a lymphoblast in size, in cytoplasm which is finely granular or foamy and in loose nuclear chromatin network.[1 7 8] As such it is often mistaken for a normal, atypical or malignant lymphocyte. The cardinal finding, however is the serrated periphery made up of cilia-like projections giving a "hairy" appearance. (Figure 1) Not all cells in the peripheral blood need show this distinctive finding, however.

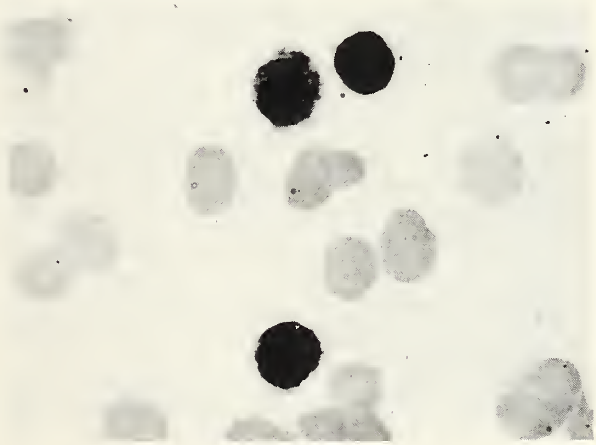

Fig. 1.

Malignant reticuloendothelial cell in peripheral blood film demonstrating typical cilia-like cytoplasmic projections.

The hairy cell appears intermediate. It possesses the reticulum cell properties of relative radioresistance, pseudopodic extrusions with ameboid motion[7] and surface ultrastructure.[9] In keeping with lymphocytes, however, the cell has sparse endoplasmic reticulum, is phytohemagglutinin responsive, and demonstrates neither adherence to nylon nor phagocytosis.[7] Most convincing is the observation that hairy cells perform as lymphocytes in that they synthesize IgG with type K and L light chains.[7] It has been suggested that this cell is the same as the flagellated cell of normal lymph node and spleen.[10]

The malignant "hairy" cell contains a distinctive acid phosphatase isoenzyme which is tartrate resistant.[6 11] This permits characteristic histochemical staining of all abnormal cells in peripheral blood, bone marrow and tissue infiltrates. This cytochemical marker is not found in lymphosarcoma, chronic lymphatic leukemia or reticulum cell sarcoma material. Patchy rather than uniform acid phosphatase activity may be seen in some cells in Hodgkin's disease sections, but this should cause no confusion.[12]

No chromosomal abnormality has been found in three patients studied.[4]

Most patients pursue a chronic course with 50% survival from three to five years following first symptom.[1 3 5] The cause of death is usually infection or hemorrhage. Thrombocytopenic bleeding is an ominous development.

There are no controlled studies concerning therapy, but certain generalities may be drawn. Cytotoxic drugs, with the possible exception of Vincristine,[4 5] usually aggravate the pancytopenia without diminution of spleen size or improved well-being.[1 6] Response of splenomegaly to radiotherapy has been most helpful in patients with slowly progressive disease,[1 3] sometimes ineffective[5] and sometimes harmful with severe neutropenia occurring after as little as 200 r to the spleen.[4 10] Steroids have produced a beneficial response, but this has proved transient and inconstant.[1 5]

Most consistent has been a clinical remission of one year or more following splenectomy. This has been especially helpful in reversing the pancytopenia of hypersplenism.[1 6] Relapse is heralded by hepatic enlargement which is initially responsive to steroids. Yam has followed four patients post-splenectomy one, five, ten and 14 years.[6]

Summary

Hairy cell leukemia is a clinical entity distinguished by the presence of a chacteristic mononuclear cell in peripheral blood and bone marrow and a chronic clinical course featuring leukopenia, splenomegaly and lack of peripheral adenopathy.

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DISCUSSION

Dr. Weed's Comments on Drs. Covey and Friedman's paper

This is certainly a very well studied case. My first comment relates to the problem of characterizing the immature cells in disorders such as the one just presented. Morphologic classification for the sake of classification alone is an old custom which goes back to the earliest days of hematology when there was not anything else to do for the patient except to classify his disease. In the case of malignant cells, morphologic classification is, I think, often a little unrealistic. As Dr. Bessis has pointed out, one of the key hallmarks of malignancy is that the pattern of differentiation departs from normal: a cell line thus may lose some of its important cytoplasmic characteristics. For example, acute lymphoblastic leukemia has been reported as appearing in a patient with chronic granulocytic leukemia. However, when the "lymphoblasts" of such a patient are studied under the electron microscope, the same cells may be peroxidase negative. Electron microscopic studies may establish the diagnosis of a myeloblastic crisis in such a patient with chronic granulocytic leukemia or in other patients with an undifferentiated blastic leukemia. Another example of the limitations of morphologic classification is the Sezary cell. This cell, because of its size and the convoluted mononuclear nucleus present in these cells as observed in the peripheral blood has been thought to represent a malignant monocyte or histiocyte. The demonstration of their responsiveness to stimulation with phytohemagglutinin, however, probably should make us reclassify them as lymphoid rather than histiomonocytic cells. The only justifications for classification are if this classification assists us in choosing the therapy for the patient, or if classification enhances our understanding. Classification for its own sake is objectionable, in my opinion, because it tends to make us think that we know more than we do. Thus, I rather like the non-committal designation of "Hairy Cell Leukemia." The response of "Hairy Cells" to phytohemagglutinin, the fact that their chromatin is clumped and they are unable to phagocytize, all support the concept that we are dealing with a lymphoid cell line, in spite of some morphologic features that make it resemble the monocyte.

My second comment relates to use of the term "reticuloendotheliosis" and even the term "reticuloendothelial system." Although endothelial cells exhibit pinocytosis and perhaps even endocytosis of platelets, there is absolutely no evidence that these cells normally have a phagocytic function. Reticuloendotheliosis and reticuloendothelial system are incorrect and misleading terms that probably should be replaced with better terms, such as reticulohistiocytosis or reticulohistiocytic system.

Pyruvate Kinase Deficiency — A Variant

Victor Grann, M.D.

The patient to be described presented in the immediate post partum period with a mild hemolytic anemia. Further study showed her to have a deficiency of pyruvate kinase (PK) with a variant form of the enzyme. Her case history, laboratory findings, enzyme characteristics and a brief review of PK deficiency are presented. The implications of this form of genetic polymorphism are discussed.

Case History

The patient was a 27 year old female who had a history of intermittent anemia since childhood. She had been treated with iron for varying periods with improvement of her hemoglobin to normal while in college. In 1968, she was evaluated at Providence Hospital in Washington, D.C., and found to have an abnormal osmotic fragility which was attributed to hereditary spherocytosis. This had not been confirmed subsequently. During pregnancy her hemoglobin varied between 9.4-11.1 gms. Past history was not relevant to her anemia except that her mother and sister were described as having mild anemias. Physical examination showed a grade II/VI systolic murmur at the pulmonic area. No liver was palpable but her spleen was enlarged 2 cm. below the left costal margin. Laboratory studies showed a hemoglobin of 10.7, hematocrit of 31%, MCV of 99, MCHC of 34, reticulocyte count of 2.4 to 5%. Slight macrocytosis and basophilia were noted on peripheral smear along with occasional pyknocytes. The haptoglobin was 76 mg. %, bilirubin 1.0 with 0.9 of indirect, and LDH 300. The serum iron was 59, iron binding capacity 345 and hemoglobin electrophoresis normal. The osmotic fragility was normal, but the incubated osmotic fragility showed a mild increase in resistance. Autohemolysis showed improvement with both glucose and ATP. (see Table I) Brilliant cresyl blue for unsaturated hemoglobin was normal.

A PK assay was performed which showed a marked deficiency of less than 20% of normal (see Table II). In addition, she had an elevated 2, 3 DPG and low ATP which are consistent with blockage at this metabolic step. All other enzymes analyzed were normal.

Additional studies characterizing her enzyme showed that it had an elevated Km, i.e., required a greater concentration of substrate to give 50% enzyme activity. The Km was 0.88 as compared to a control of 0.2-0.4 (see Table III). The Ph for optimum enzyme activity was lower than that of the control. Thermostability of the enzyme was fairly normal. When fructosediphosphate (FDP) was added to the patient's purified PK enzyme, it converted the enzyme activity towards normal. (see Table IV).

Clinical Aspects

Next to glucose 6 phosphate, dehydrogenase PK deficiency is the commonest cause of congenital non-spherocytric hemolytic anemia. This disorder is inherited as a recessive trait. Since 1961, over 135 cases have been described.[1] The majority of patients have been of northern European origin. Our patient who was Jewish, proved to be a convert and actually of English, Swedish and German ancestry.

The anemia has been variable. Many patients have been similar to ours, whereas others require splenectomy soon after birth. Of note, even during pregnancy, our patient's hemoglobin only fell to 9 gms. Other features of hemolytic anemia are present such as an elevated reticulocyte count, low haptoglobin, short red cell survival, and splenomegaly. The autohemolysis curve is abnormal[2 3] and is usually corrected by ATP, but not by glucose. Our patient showed correction by both glucose and ATP.

The pathogenesis of the hemolysis in this disorder is clearly related to a deficiency of PK. This enzyme converts phosphoenol-pyruvate to pyruvate and at the same time ADP to ATP[4 5] (Figure 1).

Heterozygotes have a decreased quantity of enzyme in their red cells, whereas homozygotes are markedly deficient. There is no deficiency in white cell PK.[3] Red cell, PK assay has been performed in numerous conditions, most of which have normal levels. However, deficiency has been described in some patients with acute leukemia and refractory anemia.[6]

There are possibly two effects of deficiency of this enzyme which cause hemolysis.[1] One is on the glycolytic pathway leading to a deficiency of ATP. This depletes the cell of energy necessary to maintain a normal electrolyte gradient between itself and its environment. There may, in addition, be a cell membrane injury caused by the excessive buildup of phosphoenolpyruvate. This combination of a low ATP level and a membrance defect produces spiculation of the cell surface and leads to trapping and destruction of cells in the spleen and liver.

Splenectomy is helpful in severely affected patients although not to the same degree as in heredi-

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TABLE 1

AUTOHEMOLYSIS

PER CENT HEMOLYSIS					
Whole Blood Plus -	Normal	Patient	Type I	Type II	Hereditary Spherocytosis
NONE	0.2-4.0	10.8	1-6	8-44	6-30
GLUCOSE	0.1-0.6	1.86	0.5-4.0	4-48	0.2-14
ATP	0.1-0.8	2.02	0.4-2.0	0.2-2.0	1-6

TABLE 2

ENZYME ACTIVITY

	Patient	*Normal Value*
Pyruvate Kinase	.96	3.71-7.05
2,3 DPG	6.00	4.20+0.20 um DPG/ml. RBC
ATP	.500	1.4+.4 um ATP/ml. RBC

TABLE 3

CHARACTERISTICS OF PYRUVATE KINASE VARIANT ENZYME

	Patient	*Normal Control*
P.K. Activity M/GmHb	.96	4.6
pH Optimum	6.92	7.30
Thermal stability (purified PK)	.87	.98
KmPEP Hemolysate mM	.88	0.2-0.4
KmPEP Purified PK mM	1.20	.66

TABLE 4

FDP STIMULATION OF PYRUVATE KINASE IN PATIENT AND CONTROL

	PK ALONE OD units	*PK with FDP OD units*	*Increase*
Patient	.007	.047	6.7
Control	.047	.205	4.36

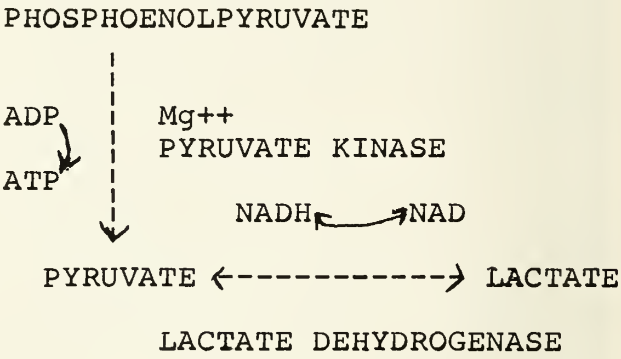

Figure 1.
Pyruvate Kinase—Place in Glycolytic Pathway.

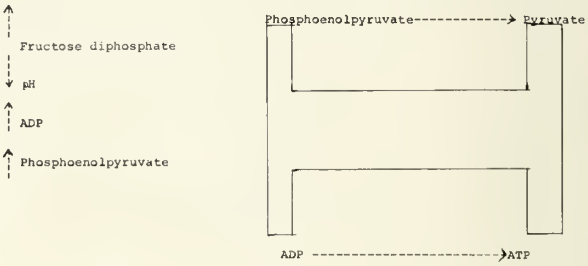

Figure 2
Model of Pyruvate Kinase

tary spherocytosis.[1] After splenectomy there is an increase in reticulocytes. This suggests that many of the younger cells which were the most severely deficient and had previously been destroyed in the spleen are now able to survive.

Our own particular patient proved to have an unusual variant of PK. If one assays erythrocyte PK activity with increasing concentrations of phosphoenopyruvate, the curve is usually hyperbolic.[7] Our patient, to the contrary, had a sigmoidal shaped curve. Her enzyme required higher concentrations of the substrate to obtain a normal enzyme activity. Fructose diphosphate converted the enzyme activity towards normal in much the same way as excessive substrate. It was also influenced by decreasing the ph of the assay system.

Other patients have been described with elevated PK Km's. Some of these patients have had PK activities lower than our patients.[8 9] Others have had nearly normal enzyme activity.[7] Since many assay systems use large substrate concentrations, such patients may appear to have normal enzyme levels. It is only by decreasing the amount of substrate in the assay system that one can bring out the true defect.

Other patients have been described with lower PK Km's.[10] These patients also have unstable binding and thus physiological PK deficiency.

Figure II graphically presents a view of the enzyme with its binding sites. FDP, pH, ADP and PEP all effect enzyme binding and activity.

Although our patient's relatives were not studied, other families with similar geneology have been described.[7] It is only in the propositus with the combination of an abnormal enzyme gene and an enzyme deficient gene that this defect is brought out. There are thus two enzymes—PK 1 which has normal function and PK 2 which has abnormal function. If the PK 1 gene of deficiency is combined with the PK 1 gene of deficiency, the patient is homozygous for the usual form of PK enzyme deficiency. If the PK 1 gene of deficiency is on the other hand combined with the abnormal PK 2 gene, the abnormal PK 2 enzyme is unmasked. The patient then has a deficient and abnormally functioning enzyme. This is somewhat analogous to sickle cell thalassemia.

Summary

In conclusion, our patient has a deficiency of pyruvate kinase along with an abnormal Km. This means that in addition to the deficiency, the patient requires higher concentration of substrate to produce the same enzyme activity. This defect may be related to faulty binding sites on the enzyme and in our patient, is partially corrected by the addition of FDP.

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DISCUSSION

Dr. Weed's Comments on Dr. Grann's paper.

I have little to add to what Dr. Grann has pointed out. The difficulties that may be encountered in diagnosing this variant of PK deficiency illustrates how we sometimes forget what is involved in an enzyme assay: We all learn in biochemistry, but we all forget, that what we measure is enzyme activity and not the amount of enzyme. With the exception of fibrinogen the same thing is true for assays of clotting factors. Activity is influenced quite clearly by the concentration of the enzyme and also by the affinity of the enzyme for substrate. Enzyme assays are dependent on the conditions under which the assay is performed. Enzyme activity in red cells, like most enzyme assays, is usually studied under conditions of saturation and optimal substrate concentration. Such assay conditions are designed for convenience and optimal sensitivity, but they do not really mimic the situation that exists in the red cells where a great excess of substrate is *not* present. For these reasons the assay may not allow detection of the high Km of PK 2 variant of PK deficiency. These considerations should be kept in mind when we are confronted with what appears to be an insoluble problem in the evaluation of an apparent intrinsic erythrocyte abnormality.

ABBREVIATIONS USED

ATP — Adenosine diphosphate, ADP — Adenosine triphosphate. FDP — Fructose diphosphate, PEP — Phosphoenopyruvate, 2,3 DPG — 2,3 Diphosphoglycerate.

Muscle Syndrome with Clofibrate Usage

Siegfried J. Kra, M.D., F.A.C.P.

ABSTRACT — **This is the fifth case presented of muscular skeletal complications presumed to be secondary to clofibrate usage and the first case in which electromyographic examinations were performed and showed abnormalities compatible with a myopathy. The symptoms included severe muscle pain and weakness which were entirely reversible when clofibrate medication was discontinued.**

Clofibrate (Atromid-S) is currently used in the treatment of hyperlipedemia. Few reports have appeared in the literature on some of the distressing side effects that may occur with the use of this medication.[1] [2]

Musculo-skeletal involvement has been described, characterized by severe muscle pain, cramps and weakness.[1] [2] [3] Three patients were observed who were taking Clofibrate presenting with these symptoms. One patient was studied carefully including electromyography as described below:

Case Report

A 48 year old female was seen for a routine physical examination in June of 1972. The patient was in excellent health except for the finding of a serum cholesterol of 350mg% and a normal serum triglycerides. She was restricted to a low cholesterol diet after the finding of an elevated serum cholesterol level.

Physical examination was normal. The laboratory examination revealed a normal white blood count with a normal differential. Hematocrit was 40% and the fasting blood sugar was 85mg%, lipoprotein electrophoresis was normal. Electrocardiogram, chest x-ray, and exercise tolerance test were also within normal limits.

Clofibrate 500mg four times per day along with dietary restriction was prescribed. Five days later, the patient began to experience severe aching in her muscles, as well as, pain in the back of her neck with headache and a generalized malaise. On the following 6th, 7th and 8th day, the patient experienced excruciating pain in her arms and legs and the patient said that she felt "as if she had a paralysis." She was unable to sleep because every movement would cause her pain.

Musculo-skeletal examination disclosed marked tenderness of the proximal muscle group of the upper and lower extremities, but no atrophy, swelling or deformity. Muscles of the upper shoulder girdle and the lower muscle groups showed marked weakness. The patient was unable to do simple maneuvers as elevation of the arms or legs. There was no evidence of any rash or fever. Neurological examination was normal. Repeat chest X-ray examination and electrocardiogram were normal.

The laboratory examination disclosed a white count of 7,000 with a normal differential and a hematocrit of 36%. Sedimentation rate was 36mm at this time. Blood sugar, blood urea nitrogen, creatinine, uric acid, bilirubin, total protein, serum electrophoresis, alkaline phosphatase were all within normal limits. Urine examination was normal. Protein Bound Iodine was 7.5. Creatinine phosphokinase was 74.7 sigma units, the upper limits of normal being 12.

Electromyographic studies were then made revealing non-specific changes with the patterns suggestive of lower motor neuron changes and loss of amplitude which are considered to be myopathic in origin.

Atromid-S was discontinued and during the following two weeks, the patient progressively regained strength and a sense of well being. She became totally asymptomatic by the end of the 16th day.

Physical examination at this time disclosed no evidence of any musculo-skeletal weakness, atrophy or loss of function; repeated laboratory examination included a serum creatinine phosphokinase level of 8.3 sigma units. The SGOT, sedimentation rate, CBC, LDH were all within normal limits. Repeated electrodiagnostic studies were again performed and were now within normal limits. The patient was not rechallenged with clofibrate and it was presumed that the illness that she exhibited was secondary to the administration of clofibrate.

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DISCUSSION

Muscular syndromes associated with the administration of clofibrate have been reported, in patients by Langera and Levy and one patient by Smith and Certofski.[1] [2] The present patient is the fifth case of musculo-skeletal changes secondary to clofibrate, and the first case in which electromyographic examination was performed.

Side effects to clofibrate have included nausea, diarrhea, skin rash, drowsiness and weakness, leukopenia, synergism with coumadin anti-coagulants, rises in serum glutamic oxalacetic, and pyruvic transaminase levels.[3] Elevated transaminase levels which have been reported, and in some cases have persisted did not cause symptoms in these patients.[4] In the case presented here, symptoms coincided with elevation of enzymes, as well as, with abnormal electromyographic studies. Creatinine phosphokinase is found predominantly in brain, heart muscle, and skeletal muscle with small amounts in the urinary bladder, kidney and gastrointestinal tract. Although isoenzymes were not analyzed, inasmuch as this patient had no evidence of disease in these organs, it is assumed the enzyme is muscular in origin.

It is important to keep in mind that patients who take Atromid-S may have elevated creatinine phosphokinase and serum glutomic transaminase. Some patients are admitted into the hospital with chest pain and may show SGOT transaminase elevation secondary to clofibrate and not myocardial infarction. Likewise, a distressing symptom caused by clofibrate is severe exhaustion. Patients with coronary artery disease and chronic congestive heart failure tend to exhibit exhaustion which might be compounded by the concomitant administration of clofibrate. The clinician should be aware that use of clofibrate may lead to these syndromes described above. The indications for its use should be well established and assessment of possible side effects diligently sought.

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Colposcopy

Howard I. Shapiro, M.D.

ABSTRACT — Colposcopic examination combined with directed biopsy should be performed on all women with significantly abnormal Pap smears, and those having suspicious cervical and vaginal lesions combined with a history of maternal stilbesterol ingestion during pregnancy. There are no contraindications to colposcopy. It prevents unnecessary diagnostic conization for what is often a trivial lesion, thereby eliminating the need for cone biopsy in over 85% of all patients examined. In the hands of a trained colposcopist, the directed biopsies accurately depict the degree of disease present. Colposcopy is painless, inexpensively performed as an outpatient procedure, and is responsible for none of the morbidity accompanying cone biopsy.

History

The colposcope is an instrument used for viewing the cervix under magnification, though it can also be effectively employed in the diagnosis and treatment of vaginal and vulvar lesions. Depending on the type of colposcope used, magnification may range from 6 to 40 times. It was invented by Hans Hinselman of Germany in 1925, and readily adopted by physicians in Europe and Australia. When introduced in the United States in 1931, it was used to screen all gynecological patients for malignancy. Papanicolaou introduced vaginal cytology soon after this, and American physicians considered it a far superior screening method than colposcopy. Famous American gynecologists, including the great Emil Novak, declared that colposcopy had little value. Within a short time it lost popularity.

To this day, many American gynecologists have the impression that cytology and colposcopy are competitive techniques. If anything, they complement each other perfectly. Mass screening with cytology allows us to pinpoint those patients with abnormal Pap smears who require colposcopic evaluation. Mass screening with colposcopy has been, and will always be impractical due to the limited number of trained colposcopists as well as the greater amount of time required for such an exam.

Technique and Its Limitations

A non-lubricated speculum is inserted into the vagina and a Pap smear obtained. The cervix is then gently cleared of mucous and examined with the colposcope. An applicator stick is used to apply 3% acetic acid to the cervix and vagina. Acetic acid has the dual properties of coagulating excess cervical mucous; and through its tissue absorption, it highlights specific abnormal areas which would otherwise go undetected. These areas are graded according to their severity of vascular atypia, intercapillary distance, color, surface pattern, and opacity. A cervical speculum helps evert the ectocervix, and use of a green filter further accentuates the atypical changes. Directed punch biopsies are then taken from the areas showing greatest atypia.[1]

To the colposcopist, that part of the cervix possessing intermingling columnar and metaplastic squamous epithelium is called the transformation zone (T-Zone). Abnormal changes always arise here. To understand this concept is to understand colposcopy, because it implies that it would be most unusual for a lesion to be out of view of the colposcope when the T-Zone is entirely visualized. This is the situation in 85% of all women examined. Under such conditions colposcopically directed punch biopsy is as accurate as the more extensive cone biopsy.[2] [3] [4]

The location of the T-Zone is hormonally dependent. It is easily seen in young, and especially pregnant women,[5] but retracts into the endocervical canal with aging. Therefore, the diagnostic value of colposcopy is greatly reduced in the older woman. Krumholz[6] has pointed out other limitations of colposcopy. He has stressed the need for diagnostic conization under the following conditions in patients with abnormal Pap smears:

a) When the entire transformation zone is not visualized.

b) When no colposcopic lesion can be found in the presence of an abnormal smear.

c) Where disease extends into the endocervix, and its limits cannot be visualized.

d) When lesions are too extensive for meaningful biopsy.

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The author is grateful to the Southern Fairfield Connecticut Unit of The American Cancer Society for the 1973 Ettinger Fellowship which enabled him to attend and participate in the Colposcopy Clinic at Memorial Hospital, New York City, New York. The author is also indebted to Dr. Roy Barnett for his valuable advice in preparing this manuscript.

e) When the cytologic smear suggests invasive disease, but biopsy reveals a lesion of lesser grade.

The Problem

Cervical intraepithelial neoplasia (CIN) is defined as all degrees of dysplasia as well as carcinoma in situ (CIS). Koss[7] and Richart[8] have demonstrated the progression of cervical atypia from mild to moderate dysplasia, severe dysplasia, CIS, and finally, invasive carcinoma. Epidemiologists have assembled convincing evidence that early age of first coitus, and exposure to multiple sexual partners is directly related to CIN. The sexual revolution is upon us, and as a result physicians are seeing an increasing number of young women with abnormal Pap smears. In most areas of the United States doctors confronted with this problem usually repeat the Pap smear in the hope that it will revert to normal. The method of investigation of the persistently abnormal smear has been diagnostic cone biopsy and dilation and curettage. The numerous hazards of cone biopsy include immediate and delayed hemorrhage, uterine perforation, infection, cervical stenosis, infertility, dyspareunia, and contact bleeding. This morbidity is often incurred while the cone biopsy proves negative for malignancy. In the pregnant patient, cone biopsy presents even greater risks of hemorrhage, inadvertent rupture of the membranes, and infection. Less traumatic diagnostic techniques, such as four quadrant punch biopsy and multiple undirected biopsies result in an unacceptably higher percentage of false negative histologic specimens.[9 10] The addition of Schiller's iodine solution applied to the cervix and vagina is also of limited value since endocervical columnar epithelium, and benign squamous epithelium as well as malignant cells fail to take the iodine stain.

Another emerging problem is the detection of benign adenosis, and malignant vaginal and cervical adenocarcinoma in the female offspring of mothers who ingested diethylstilbesterol as treatment of threatened abortion during their pregnancies in the 1950's and 1960's.[11] The greatest exposure to stilbesterol was in the New England area; and screening, evaluation, and treatment of all young women exposed to this carcinogenic influence must be carried out. This is best accomplished with Pap smear and colposcopy.

Finally, there is the problem of cost. In this era of rising medical expenses, emphasis is being placed on safe, inexpensive, ambulatory techniques in the delivery of health care. Cone biopsy meets none of these criteria whereas colposcopy fulfills each one.

Treatment

Colposcopy allows individualization of treatment for the patient with CIN. Varying degrees of dysplasia have been treated with excisional biopsy, cauterization, cryosurgery, conization, and hysterectomy.[4 6] Treatment is dependent upon the severity and extent of the lesion, age of the patient, desire for more children, and co-existence of other gynecological problems. With the diagnosis of CIS in the older patient and those desiring sterilization, hysterectomy is often the treatment of choice. However, in the younger women with CIS adequate treatment is excisional biopsy under colposcopic visualization for localized lesions, and therapeutic cone biopsy of the T-Zone atypia when the lesion is more extensive. Townsend[4] has treated many patients with cryosurgery in the presence of both localized and extensive CIS. His results have been good, but such treatment must still be considered experimental.

Colposcopy is a relatively easy subject to learn, but a difficult one to master. Reading atlases and attending conferences is of great help, but there is no substitute for examining many patients under the tutelage of an expert. Once colposcopy is learned, proficiency will be directly related to the number of patients one examines. Townsend has trained nurse technicians who routinely do colposcopy and endocervical curettage with great accuracy. Under the directorship of Adolph Stafl[2] all Wisconsin residents with abnormal cytology are referred to one of six colposcopy clinics situated throughout the state. These clinics are staffed by trained physicians.

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Fifty Year Members Honored

A total of 14 physicians were honored as fifty year members of the Connecticut State Medical Society at the 182nd Annual Meeting in Hartford recently.

Left to right are Dr. Sidney L. Cramer, of Hartford, Past President of CSMS who presented the awards to Dr. William Cohen, of New Haven; Dr. Barnett Greenhouse, of New Haven; Dr. Walter Louis Hogan, West Hartford; Dr. Albert Joseph Howard, New Haven; Dr. Alfred Kornblut, of Bridgeport; Dr. Maurice Timothy Root, West Hartford; and Dr. Robert Mitchell Taylor of East Haven.

The following were not able to attend the Annual Dinner, but will be presented their pins and certificates at a later date. They are: Dr. Halford Benson Kneale, of Fairfield; Dr. Henry Katz, of Hartford; Dr. Alfred Norton Sweet, of Middletown; Dr. Marion Dallas, of New Haven; Dr. Mariano Louis Riccitelli, of New Haven; Dr. John Louis Jack, North Haven and Dr. Henry John Stettbacker of Cambridge, Maryland.

Chemical Face Peeling

Edward N. Ludin, M.D. and John L. Krause, Jr., M.D.

A relatively new technique has been added to the plastic surgeon's armamentarium in his quest for facial rejuvenation. The fountain of youth is not within our grasp, but we do receive many requests to "turn back the clock". For many years we have had to be satisfied with the effective classical face lift and blepharoplasty surgical procedures. However we have not been able to adequately remove the fine wrinkling of the facial skin utilizing either of these classical surgical procedures. Though dermabrasion has been used, it has not been universally successful and has been dropped for this purpose by most plastic surgeons.

In 1962 Baker first published in the plastic surgery literature a technique for chemical face peeling.[1] This publication was preceded by a presentation on the same subject by Litton at the 1961 annual meeting of The American Society of Plastic and Reconstructive Surgeons, published in 1962.[2] Many subsequent articles have appeared (see references). The technique is primarily useful for eliminating the *fine* wrinkles of the facial skin. These are usually found on the upper and lower lips, cheeks, nasal root, forehead, and lateral to the outer canthi of the eyes (crow's feet). Since a side effect of this treatment is lightening of the color of the skin, it is also occasionally useful for skin pigmentation problems. The same side effect precludes its use in dark skinned individuals. It is useless for the treatment of scars (for example acne scars).

The formula described by Baker and which we use is as follows:

3cc of phenol (liquid USP)
2cc of water
2 drops of croton oil
8 drops of liquid soap

A fresh suspension is mixed for each use. After carefully drying the skin with ether, the phenol is painted on the skin using a cotton tipped applicator. Care is taken to go to natural folds (such as the naso-labial fold) or into the hairline to avoid a line of color demarcation. Care is taken to avoid contact with the conjunctiva. After application of phenol, waterproof adhesive tape is placed tightly over the treated area. The tape is left in place undisturbed for 48 hours and then removed. The moist skin beneath is then dried by application at regular intervals of thymol iodide powder (USP) until a dry mask occurs. The next day washing is begun and a mild antibiotic ointment is applied. Within a week the skin is healed, bright red, and *smooth.*

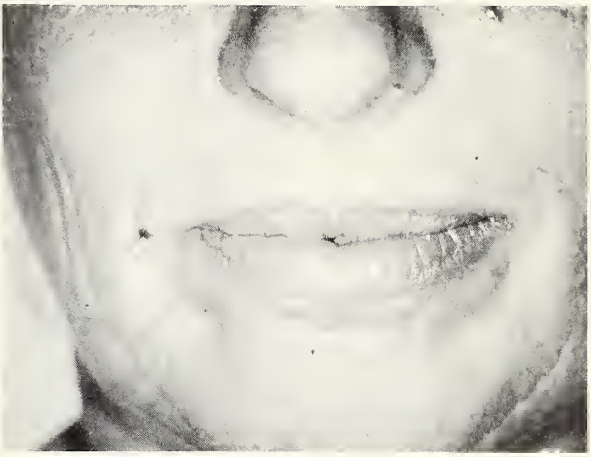

Fig. 1
Fine wrinkling of the skin—Pre-chemical peel.

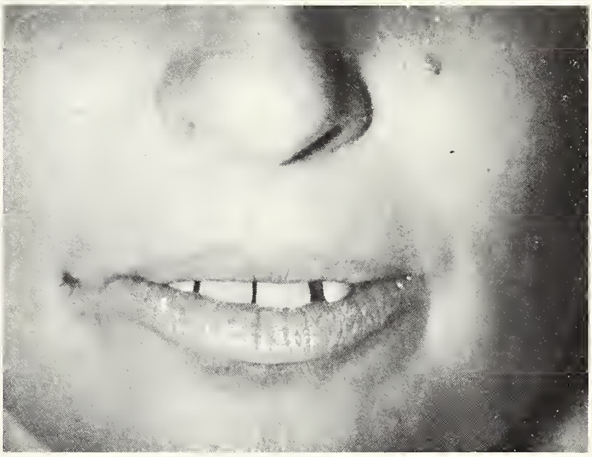

Fig. 2
Six months post-chemical peel.

The rationale, toxicology, histology, and complications have been adequately and completely described in other publications. For those who are interested, we refer you to those cited articles.[3] [4] [5]

In our hands this treatment has been a welcome addition to offer the increasing number of patients, both men and women, who are seeking to maintain their youthful appearance as long as possible. Careful selection of the available treatments, properly timed, and individualized for each patient will provide the best results.

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Connecticut Physicians' Art Association Awards

The Connecticut Physicians' Art Association exhibit was held April 30, May 1 and 2 at the 182nd annual meeting of the Connecticut State Medical Society in Hartford at the Hartford Hilton Hotel.

The "best in show" award was given to Joan P. Levy, wife of Dr. Lewis Levy of Orange, for her oil entitled "Apothecary," and the John M. Freiheit Award, given by the New Haven County Medical Association, went to Dr. Michael Sharon of Ellington for his photograph, "Alicia."

In the professional class in painting, Dr. William Schneider, of Rockville, won first for "Storm Prelude," an oil, while second went to Dr. Sophie C. Trent of Meriden for "Colorama."

In the intermediate group, Barbara Olson, wife of Dr. Lowell Olson of North Haven, received first prize for her oil, "Sketch of a Man," with second prize going to Barbara Ruderman, wife of Dr. Mark Ruderman of Hartford, for her acrylic entitled, "Ode for Margot."

Mrs. Lillian Della Selva, Bridgeport, mother of Dr. Anthony P. Cipriano, was awarded a second prize in the beginners' class for her oil entitled, "Beardsley Park."

Also in the beginners' class, Dr. Ralph Parker of Bridgeport won both first and second prize for his watercolors "Canaan at Midnight" and "Winter Birches."

The first prize for prints and drawings in the professional group was given to Barbara A. Calogero, wife of Dr. John Calogero of Hartford, for an aquatint, "Young Woman." Second prize was awarded Greenwich physician, Dr. Tibor Cholosky, while his wife, Janice, took honorable mention with a collage, "Buttercups and Lace."

Dr. Robert Lowman of North Haven won the first prize in the intermediate class with his ink drawing, "Sea Sketch." The first prize in the beginners' class went to Dr. Allen Silverstein of Portland for his woodcut, "Tranquility," and Dr. Tibor de Cholnoky's watercolor, "Buttercups" was given honorable mention.

An honorable mention went to Diane C. Silver of East Hartford, daughter of Dr. Anthony P. Cipriano for her pen and ink entry entitled "Another Doodle."

In the children's group, first prize was awarded to Ciara Concannon, daughter of Dr. P. R. Concannon of Middletown, for a batik, "Through the Looking Glass," and second prize was won by Peter Calogero, son of Dr. John Calogero of Hartford for his "Machinery Mountain" done with magic marker.

In the photography group, Mary Sheehan, wife of Dr. J. Sheehan of Ridgefield, won first prize for a black and white "Double Exposure." Dr. Manny Myerson of West Hartford won second for "Seagull." Honorable mention was awarded to Curt Czarsty, son of Dr. J. C. Czarsty of Oakville.

Sylvis Schechtman, wife of Dr. Charles T. Schechtman of New Britian, won first prize in sculpture for "Adonis" done in soapstone, and Libby Pinkes, wife of Dr. Sam Pinkes of West Hartford, received honorable mention.

The first prize in children's sculpture went to Sheri Valentine, daughter of Dr. G.W. Valentine of Cheshire, and honorable mention was awarded to Jeffrey Miller, son of Dr. Donald Miller of Haddam.

The judges were Mrs. Ethel Stauffer of Hamden, painter and teacher, past president of the New Haven Paint and Clay Club; Mrs. Mary Roy of Hartford, painter and teacher; Mr. G. Martin of Hartford, professor at the Hartford Art School of the University of Hartford.

The co-chairmen of the exhibit were Dr. Eugene Rightmyer of New Haven, president of the Connecticut Physicians' Art Association, and Mrs. Orvan Hess of North Haven, vice-president.

The President's Page

One of the objectives of the CSMS is to develop a state-wide Peer Review Organization for the State of Connecticut.

Peer Review has been operational in hospital staffs and county organizations for years. It is one of the main objectives of any Foundation for Medical Care. It is a voluntary control mechanism which tends to upgrade the quality of medical care delivered in an area.

In its inception this system started in hospital medical audit committees, which would spot check charts for quality care, and in tissue committees, which would review all tissues removed. With the advent of hospital utilization committees those charts with longer than usual length of stays were reviewed. County review committees reviewed cases that were brought to their attention upon complaints of patients, physicians or third party payors. As the computer moved in and as norms, standards and criteria were developed, only deviant claims bucked out by the computers to their third party masters were given to review committees.

The question that soon arose was who was developing these norms, standards and criteria? and who was determining what third party payors would pay for services rendered? The terms "usual and customary" and "fee schedules" were coined.

The CSMS always has maintained that norms, standards and criteria should be developed by physicians; that the reasonable charges should be set by physicians; and that review of medical care should be done by physicians.

Perhaps the most potent catalyst to the PRO movement was the unwelcome PSRO law (Professional Standards Review Organization law). At the moment this law involves only inpatients who are paid for by the government (mainly Medicare and Medicaid). This law places its emphasis on concurrent and perhaps even prospective review of these inpatients.

Like it or not, Connecticut has been assigned four PSRO areas—Hartford County, New Haven and Litchfield Counties, Fairfield County and the four Eastern counties. Each of these PSRO areas is to implement the law through local review at the level of its constituent hospitals.

The PSRO law goes beyond PRO in that the tenacles of direct governmental controls are in it. The PSRO area is accountable to HEW. The CSMS House of Delegates decided to back the AMA view that rather than just putting primary emphasis on repealing the law, we should seek to implement it and seek constructive amendments to it. Reliable sources tell us that politically there is no chance for repeal of this law at the present time.

The question then faced us as to how to establish these four PSRO areas and how to draw them together into a uniform effort and allow for intercommunications between them.

Here's where the Institute comes in. The Institute will be controlled by practicing physicians although it will have some non-physicians on its Board. It will provide a central data bank system interlocking with each PSRO area. It will provide for intercommunications and exchange of data between the PSROs. It will serve as a foundation from which to develop a state-wide PRO program in Connecticut thus enabling us to stay ahead of and perhaps even avoid some of the direct governmental controls. It will help develop norms, standards and criteria.

We hear the words "norms, standards and criteria" used all the time now. We must be sure we know what they mean.

Norms are the average range of performance given in statistical terms.

Standards are the range of allowable variations of performance.

Criteria are the measurable elements of health care as determined by professionals. These include indications for admission, length of stay, services consistent with diagnoses, indications for discharge, ambulatory care.

James H. Root, Jr., M.D.
President

Connecticut Medicine

Editorials

Hospice and the Terminally Ill

Surely as there is human life, there will be death. But what kind of death? Physicians are in the unique position of being able to determine for so many of their patients the kind of death each will have. Too often, the science of medicine overcomes the art of medicine and patients for whom there is no reasonable hope of cure are not allowed a quiet and dignified exit from this world. All forms and shapes of artificial life support systems are employed and the misery of a cancer ridden body is prolonged. Only in recent years have physicians finally appreciated that it is possible to give terminally ill patients support, physical and psychological, and allow passage from life without violating their sacred oath to prolong life.

Hospice is a concept that champions death with dignity. In this issue of *Connecticut Medicine* is a thought provoking essay by the Reverend Edward F. Dobihal about the plans for establishing a Hospice in Connecticut for terminally ill patients. This is a concept proven by experience in England to work and work well. Anyone that has had the pleasure of hearing Dr. Cicely Saunders, the founder of St. Christopher's Hospice in London, speak of the magnificent experience with her patients and their families must come away refreshed with recognition of one of the often overlooked roles of the physician. The role of compassionate support of the patient facing death with recognition that further prolongation of life is not within his grasp is a concept that is not yet acceptable to many physicians. It can only be hoped that the example of Hospice in our own community will serve not only a critical patient need, but will also serve as a teaching-learning experience for all who devote themselves to relieving the suffering of their fellow humans.

Ira S. Goldenberg, M.D.

A Resolution

Due Process for Physicians Employed by the Hospital in Medico-Administrative Positions.

The AMA News on January 14, 1974, reported that the Joint Commission on Accreditation of Hospitals adopted the following standards governing body and medical staff relationship:

This was approved by the JCAH commissioners:

"Physicians . . . employed by the hospital, either full or part time, whose duties are medico-administrative in nature and include clinical responsibility or functions with the medical staff involving their professional capability as physicians . . ., must be members of the medical staff, achieving this status by the same procedure provided for other staff members. . . .

"Hospital and medical staff bylaws should provide that termination of employment of a physician . . . in a medico-administrative position shall be subject to a review by a joint conference of hospital governing board representatives and representatives elected by the medical staff as a whole to determine the nature of the reason for the action and whether both his administrative position and medical staff membership and privileges or either shall be affected.

"When the reason for the action is determined by the joint conference to involve the individual's medical competence, the medical staff shall provide for a review of the decision, including a right to a hearing if requested by the individual, and a recommendation to the governing board on the action proposed.

"When the reason for the action is determined by the joint conference to be purely administrative in nature and does not involve the individual's medical competence, the governing board shall follow its usual personnel policies, or the term of the contract, if there be one."

When a physician is employed by the hospital "whose duties are medico-administrative in nature and include clinical responsibilities or functions . . .", it is difficult to see how any action of his could be purely administrative in nature neither dependent on nor related to his functions as a physician. Some courts in trying to determine this difference between administrative and professional duties or functions have concluded that this is difficult and almost impossible. If so, it would seem that a physician is being denied due process such as this House and Judicial Council have defined it. As written, there is no appeal or review of the determination by the joint conference of the hospital. This "new language" is important enough so that it should be reviewed by our commissioners and taken back to the Joint Commission for further discussion and review, with a report back to this House, on the grounds that without further clarification it represents a denial of due process as this House understands it. Therefore, be it

RESOLVED: That this House instruct our commissioners to the Joint Commission on Accreditation of Hospitals to review the recent action of the Joint Commission in its interpretation of "Standard 8 of the Governing Body and Management Section" relating to its action which would terminate the employment of a physician in a medico-administrative position theoretically acting in a "purely administrative" function as determined by the joint conference committee, without any right of appeal or review by his peers on the medical staff of such a determination. And be it further.

RESOLVED: That it is the feeling of this House, without more information and background than that given in the AMA News of January 14, 1974, that the standards related to physicians employed by hospitals in medico-administrative positions, adopted by the JCAH, represents a denial of procedural due process as held by this House.

Fred Fabro, M.D.

Peer Review and All That

Three Little Words

There are only a few nouns in the English language that have two directly opposite meanings. Such a one is "peer." As if that were not remarkable enough, the word also has a third meaning as a verb that has no etymological relationship to the other two meanings.

The first definition is "*Peer:* one of superior rank or position, a nobleman, a holder of one of the five degrees of British nobility: Duke, Marquis, Earl, Viscount, or Baron." Its second meaning is more humble: "*Peer:* one of the same rank, an equal, a comrade."

Will the peer review process of the Professional Standards Review Organizations (PSRO) bring together a group of comrades, reviewing records and clinical procedures out of mutual interest and concern for the welfare of the patient, as equals? If so, this new legislation will survive and might even go down in history as a triumph for self-regulation in a voluntary medical care delivery system.

Or will each PSRO nominate a new nobility, a dapper dukedom in the elegant echelons of medical politics, a veritable "House of Peers" to review the work carried out downstairs, in the Commons, by the ordinary doctors there?

If the second pathway is taken, the medical profession will fail to cooperate. If peer review involves a new nobility, the system will fail despite the arm-twisting of a politicized bureaucracy, induced financial penalties, and the "leverage of constraints." This delightful term "leverage of constraints" (politely coined by the Department of Health, Education, and Welfare) means, in simple English, that you will not be paid for your work unless you conform to the new PSRO regulations.

Medical care cannot be given under coercion. It is a form of social intercourse involving a "collective action" between doctor and patient. It cannot be carried out at the end of a gun, any more than other forms of intercourse.

Being, like most surgeons, a persistent optimist, I want to believe that the peer review process will improve the quality of patient care. Unfortunately, current trends are in the other direction. The entire thrust has been distorted to "cost containment." The PSRO will accomplish merely the definition of allowable or permissible charges. There is no clear connection between this frantic political activity and the quality of clinical care.

Let us consider an example. A 45-year-old woman wishes to have a hysterectomy because of recurrent vaginal bleeding from a small submucous fibroid. The "normalized" hospital stay for a hysterectomy is 8.4 days. Certain laboratory tests and examinations are required and acceptable. If these conditions are met, the surgeon and the physician are paid and so is the hospital. But we still have no idea of whether or not the hysterectomy was really needed. Would she be better off just to await the natural menopause? We have no idea whether or not the inevitable urethral catheterization emptied the bladder of urine but filled it with *Escherichia coli,* leading to persistent pyelonephritis. We are not told whether or not the laboratory "norms" contained an adequate screen to determine that her anemia was actually pernicious anemia, rather than blood loss. And certainly we have no idea as to whether or not the patient and her husband understood clearly what was being advised and what was involved. We have no concept of whether or not the anesthetist was competent to introduce the endotracheal tube without injuring the vocal cords, whether or not an adequate allergic history of prior anesthetics was taken before administering a drug such as halothane to the point of deep coma. We have no concept as to whether or not the scrub nurses that day were a little careless and brought instruments into the operating room from the one next door where an abscess was being drained. In short, all the elaborate PSRO conditions were met, but we have gained no insight into the quality of the patient's care.

Moreover, when the patient did get ready to go home after 8.4 days, the surgeon still felt that she was a little weak and wobbly and should not really go home quite yet. He was a little worried about her strength. Her pulse was still elevated, even though the electrocardiogram appeared to be normal. Looking over his rule book for PSRO, he could find no identifiable complication that would justify her further stay in the hospital. If he asked her to stay on for a day or two, neither he nor the hospital would be paid. The patient would have to pay out of her own pocket. There would always be the slight suspicion that maybe the doctor had done something evil. And possibly he would be asked to pay the additional hospital bill out of his own pocket.

So, the PSRO conditions being met, she went home. And climbing the stairs two days later, she suffered a fatal heart attack. Looking back over that last day in the hospital, the consultant for the plaintiff's lawyers points out that maybe there was a little evidence of electrical instability in that ECG and that her medications and electrolyte values should be rechecked because of the danger of an arrhythmia.

Such a case tells us of the glaring faults and shortcomings of the PSRO as now being advocated by federal and local government. In addition, it may signal one of the most famous law suits in the history of American medicine. The chairman of the local PSRO could, of course, be sued for malpractice. It was his insistence on meeting these arbitrary rules that forced the patient to be sent home before the doctor felt it was wise. This caused her death.

Such painful examples can be strung out far longer than this editorial should stretch. They merely emphasize that the definition of the length of stay, permissible charges, and norms for patient care (instituted by a self-appointed peerage) may constitute peer review; they do not constitute either the practice of medicine or the definition of high-quality care.

The passage of the Bennet Amendment will mark the beginning of a period of extravagant expenditure of public funds for the establishment of a new bureaucracy to regulate medical practice. This new set of rules will signalize the beginning of an intense power struggle, long latent or dormant, between physicians and those who seek to enter the doctor-patient interface. This truly will be a struggle between "town and frown." The value of peer review as it grows, blossoms, and then later withers, will depend on which of these two meanings of the word "peer" finally comes to prevail.

The definition of payable charges for in-hospital medicine is surely but a petty objective in the overall battle plan for the improvement of American medical care. We should instead be devoting our attention to primary care, home care, family care, and the work of the first-contact physician. The peer review process and PSRO do absolutely nothing about these critical matters. They leave untouched the problems of access, nonuniform distribution, availability of personnel, training, productivity, competence definition, specialty certification, staff credentialling, and the educational process.

It took the Regional Medical Programs (RMP) a decade to die. They were launched with about the same amount of fanfare. It is my prediction that the PSRO will die more quietly, without too much of a convulsive struggle, in about seven years. Give it until 1980.

The RMP supplied kudos, national appointments, employment opportunities, and local prominence for administrative personnel who enjoy playing the game of medical politics. It was grossly ineffective by any clinical criteria. It did not help a number of patients appropriate to the expenses incurred. It demonstrated again that our federal government is not an effective operational modality at the doctor-patient interface.

There is a general social principle known as the "generational acceleration of social change." We would estimate that this will act to accelerate the death of PSRO even faster than RMP.

Peering dimly into the future, then, we can discern what sorts of peers will do the peer review. We predict that they will constitute a new nobility (authority without peer), peering into the records of patients written by physicians whom they no longer regard as their peers. An essentially malignant process, this cancer will be lethal and PSRO will die because the wrong definition of the key noun came to prevail.

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Reflections from the Dean's Office

Robert U. Massey, M.D.

The rapid increase in the number of applicants to professional schools in the past few years is beginning to excite comment from educators and university administrators, and should concern all of us who have recently been distressed over the overproduction of doctors of philosophy in other fields.

A feature article in the *New York Times*, May 16, 1974, reported that one-third of the Columbia College class of 1974 will be attending either law or medical school next year. In one liberal arts college in Connecticut almost half of the freshman class are premedical students. Applications for the Medical College Admissions Test for next year are up almost 20 percent nationally.

America's medical schools are providing only half the physicians being licensed in this country each year. The pressures to admit more and to produce more continue to be upon us; even so, the uncertain signals from our Federal masters are to slow our production of graduates and knowledge. In effect, the suggestion is to restrict the output, while at the same time, to lower the cost of medical care.

As usual, the signals are uncertain, and the inexorable workings of the market and history will frustrate the planners. Unfortunately, colleges and students may be hurt in the process. Undergraduate education will for a time become little more than grinding preprofessional preparation, and some medical schools in their frenetic efforts to respond, may be converted into trade schools monotonously assembling technologists for the "health industry."

The problem has many facets: thousands of students are losing their chance for a liberal education in their efforts to please medical college admissions committees who will probably reject them anyway; some medical educators are proposing ways of handling larger numbers which look very much like apprenticeship without science; American students are going abroad to medical schools whose admission requirements are stated in dollars; we are importing half our new physicians from nations that can ill afford to lose them; and some American medical schools are in danger of closing for lack of funds.

Obviously there are no simple solutions; what can be said is that for the world's wealthiest nation to import half its physicians is immoral. The gap between the developed nations of the Western and Communist worlds and the undeveloped nations of the Third World is widening. We are already devouring far more than our share of the world's energy; must we devour brains as well? One of America's products for export should be medical manpower.

Premedical advisors should be prepared to talk of alternative careers. The policies and expectations of admissions committees ought to be clear to every student and premedical advisor; I have examined the transcripts of rejected applicants and have seen evidence of four years spent acquiring a most illiberal education. The few C's are in French, English composition, and sociology. Every other course is a physical or biological science. Someone gave bad advice, or none at all.

Rolla B. Hill[1] said the premedical curriculum was compounded of fear, ignorance, and conformity—fear of admissions committees; ignorance of admissions policies; and conformity with what premedical students have always done.

One of Columbia's students, commenting on what has come to be called "preprofessionalism" said, "The institution becomes a grub factory of sorts," and another, there is "a loss of that feeling of intellectual adventure."

Medical schools will need to continue to expand in size and number until we can meet our needs without relying on graduates from abroad. In the meantime something should be done to convince the prelaw or premedical student that his planning should include alternative careers. What can be made clear is that plans for a career in medicine need not make shambles of undergraduate education, and that college is more than a preparation for the first two years of medical school.

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REFERENCES

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Medical Experience In Vietnam

Richard S. Wilbur, M.D.

War is a grim school—but that very grimness requires and produces new medical knowledge that can be invaluable for civilian as well as military doctors. Much as we American physicians abhor the tragedy and carnage of war, it would also be tragic if we did not avail ourselves of its hard-learned medical lessons.

Each of America's conflicts has taught such lessons. Army Dr. William Beaumont's pioneer work on gastric digestion was an outgrowth of the War of 1812. The Civil War led to effective ambulances and the Army Library of Medicine; the Spanish-American War to research in—and conquest of—yellow fever. World War I stimulated the development of orthopaedics. World War II ushered in many medical advances, particularly in psychiatry and burn therapy.

It is not surprising, therefore, that lessons for civilian medicine can be learned from the recent military operation in Vietnam. A principal lesson involved climatic adaptation. This was not the first time the United States transported an army from the temperate to the tropical regions. It had done so in the Cuban, Philippine and South Pacific campaigns. But in all those campaigns, the casualties from disease far outstripped those from enemy action. The Vietnam war produced a sharp reversal of this ratio. Not only was a Western army able to fight in the tropics without excessive attrition from disease, but also the loss of military manpower other than from battle-incurred injuries was the smallest in the history of warfare.

There were a number of significant reasons for this unprecedented success.

One was a stringent application of the principles of preventive medicine. Significant outbreaks of amoebaisis, hepatitis, or bacillary and toxic dysenteries were prevented by the provision of safe food and water and by use of either sanitary dish-cleaning equipment or disposable dishes and tableware. Malaria, which had so depleted the French in Vietnam and the British in Malaya, was controlled by the widespread prophylactic use of cloroquin-primaquin. This was supplemented by dapsone in areas where the relatively resistant falciparum strain of malaria was endemic. The same techniques were applied to the South Vietnamese army with so much success that the discovery of severe malaria in a native soldier virtually ensured his identification as a North Vietnamese or Viet Cong rather than a South Vietnamese, regardless of what he said he was. Conversely, American soldiers captured by the Viet Cong and later released in the prisoner-of-war exchange all suffered from malaria and/or parasitic diseases.

Although within its borders the United States itself has experienced a considerable drop in the incidence of diseases transmitted through food and water or by vectors such as mosquitoes, there is no reason for complacency. The medical lessons of Vietnam teach us that despite the enthusiastically advertised life styles of some of the younger generation, sanitation and hygiene are not only desirable but medically necessary. Good health habits lower disease rates and health care costs.

A second reason for the success against disease in Vietnam had to do with transportation of patients. In previous wars, medical care was given as close to the scene of injury as possible, in order to minimize the interval before definitive treatment. Therefore, it was often given in tents or other makeshift facilities where surgeons worked under relatively primitive conditions and handled complex procedures with inadequate equipment. Spurning the idea of numerous small-tent hospitals, the military in Vietnam favored a lesser number of relatively permanent and well-staffed facilities fully equipped with sophisticated apparatus. Ground ambulances and helicopters were used to bring the seriously wounded to these hospitals—and were so rapid that the average time from injury to initiation of definitive treatment was only 45 minutes. The system required fewer physicians and other health professionals. Also, it lowered the rate of deaths occurring among the wounded after arrival at the hospital. Indeed, if the number who died in transit are included, the percentage of wounded who failed to recover was the lowest of any war.

To extend and support this system, tertiary care was delivered in large permanent hospitals in Guam, the Philippines, Okinawa, Japan, and even the United States proper. The C-141 Starlifter jet used to carry cargo to Southeast Asia was internally reconfigured to carry casualties on its return trip to the United States. More recently, the C-9A—the first jet internally structured solely for medical evacuation purposes—helped carry patients to the

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DR. RICHARD S. WILBUR, Assistant Secretary of Defense (Health and Environment), Washington, D.C., July 1971 to September 1973. Clinical Associate Professor of Medicine, Georgetown University School of Medicine, October 1971 to date.

facilities appropriate to their precise care requirements. This sometimes meant flying them halfway around the world. For instance, badly burned patients might be taken to the Army Burn Center, Brooke Hospital, San Antonio, and many neurosurgical cases were taken as far as Walter Reed Army Hospital, Washington, D.C. The result was a marked improvement in complication and mortality rates and in speed of recovery.

These lessons have not been lost. Acute civilian casualties are now being evacuated in a number of U.S. areas by the Military Assistance to Safety and Traffic (MAST) program. Active-duty medical helicopter units respond to calls from appropriate civilian agencies and transport seriously injured accident victims from remote areas to hospitals. These constitute a direct use of military equipment to assist civilians.

Regional planners would do well to study the Vietnam experience before arranging to place multiple small medical units in all corners of any given geographic region. Military lessons indicate that a better quality of health care at a smaller cost in manpower and money can be provided through a smaller number of well equipped and staffed, efficiently organized units plugged into a good transportation system.

Some of the credit for expedited care in Vietnam goes to the medical corpsmen and the two-way radio. The civilian counterpart could be a physician's assistant with a telephone or, eventually, even television. The intricate problems involved in the relationship between the isolated paraprofessional and the physician in control are more easily resolved in a military setting. However, these problems should not impede our study of appropriate ways to adapt the idea to civilian settings.

A third general reason for the success in Vietnam was the lessons that were learned about environmentally controlled temperature and humidity in the hospitals. Such controls sped the recovery from both disease and injury in an otherwise adverse climate. Also, the military discovered the value of a well-organized whole-blood supply system—one which enabled quality-assured blood to be delivered to Southeast Asia within four or five days after collection. It cut patient recovery time and minimized the number of complications.

The lessons learned in drug abuse and rehabilitation will have continued usefulness on our side of the Pacific.

A well publicized—probably too well publicized—heroin epidemic broke out among U.S. servicemen in Vietnam during 1970. Throughout that and the following year, the extent of the epidemic was unknown. The only documentation was the highly suspect statements of known users and the statistics from drug seizures or hospital admissions for overdose.

To control the epidemic, the first step was to ascertain the number of users who would require treatment and rehabilitation and then to identify the individual users. Law enforcement means had been unsuccessful as an avenue to identification, so a program of voluntary application for care was introduced. This was the successful Exemption Program under which 70,000 users were treated in 1971-72. It was followed by an involuntary program of identification through urinalysis. This approach posed difficulties, because the only available technology was a kind that had been directed at a small number of civilian addicts. Through major modification in the technology, however, millions of military personnel were screened—and so effectively that even the low drug levels present in experimenters were detected. There were many of the customary mishaps involved in starting up a vast new project. As these were overcome, the system was steadily enlarged. Initially, only those men who were about to return to the United States from Vietnam were tested, so that they would not return while still addicted. Later, all the persons who remained with their units in Vietnam underwent unannounced tests by random selection every quarter. Finally, the program was extended worldwide to all military personnel for the detection of opiates, barbiturates, and amphetamines.

Over the succeeding years, these tests were steadily made more sensitive and reliable. The techniques of collection constantly were improved, and false positive tests became a rarity. In Vietnam, this method initially indicated a 5% usage rate. Subsequent investigation showed that this probably was falsely low. Despite the improvements in technique, which led to fewer users slipping through this screen, the rate of identified usage dropped steadily until a year later it was 0.5%—one tenth of that discovered at first.

This same system can be used to detect the first beginnings of an epidemic. When outbreaks appeared in Germany in the early summer of 1972 and slightly later in Thailand, the worldwide program of routine random sampling detected them and showed the Department of Defense where the placement of treatment and rehabilitation efforts would be most efficient. It also showed commanders where they had the greatest morale problems.

Thus has the military demonstrated successful techniques on how to locate persons who use drugs and need treatment.

In drug epidemics, like other kinds, prevention is vital. The military achieved this through a multimedia approach to young servicemen believed to be susceptible. A previous campaign against marijuana had relied upon scare tactics and had included considerable factual misinformation. Naturally it had been totally unsuccessful in dissuading potential users, who knew better. The new anti-heroin campaign relied upon programs credible to potential users. These put particular stress on "face to face" encounters with their peers, former addicts, or physicians. Each of these approaches gave the young serviceman an increased awareness of the problem and helped him make an intelligent decision on whether or not he should use dangerous drugs. Unfortunately, surveys of heroin-using soldiers in Vietnam offer much evidence that their decision to use drugs was made years before they entered the military—often as early as ages 8 to 12. So even though many of them were still in their teens, the military's preventive efforts could be too late.

Another valuable educational program was dedicated to lowering the resistance of the armed services leadership to in-service rehabilitation efforts. After a series of seminars, they became strongly supportive—and the result was a larger number of successful rehabilitations. Also, it was essential to educate the supervisors and physicians—supervisors so that they could recognize drug abusers and support patients during follow-up therapy, doctors so that they could give proper diagnosis and treatment.

The Army in Vietnam learned and developed valuable lessons in the rehabilitation of drug abusers. While the widely publicized civilian programs for civilian prisoners and for street addicts have proven largely unsuccessful, the military attained success with a relatively short-term treatment calling for not more than 90 days of in-patient care. It used a variety of rehabilitative approaches, the most effective of which combined firm discipline with a high degree of humanitarianism. Early in the heroin epidemic, it was recognized that the serviceman who was a drug dependent was a different person from the criminal or the street addict. He was young, ordinarily healthy, accustomed to military discipline, and generally not involved in the criminal aspects of heroin abuse. He recovered rapidly from the physical effects of heroin withdrawal, usually requiring no medication at all. What medication was used was ordinarily chlordiazepoxide or another tranquilizer. Despite the paucity of medication, severe physical withdrawal symptoms were relatively mild and short-lived. Rehabilitation techniques took advantage of the favorable characteristics of the military drug user, so that the great majority of men treated have been restored to active duty or to a heroin-free civilian life.

The success is confirmed by Professor Lee N. Robins of Washington University of St. Louis, in an interim report entitled the "Follow-Up Study of Vietnam Drug Abusers," sponsored by several federal agencies. Drawing on random selection techniques and personal interviews of drug users and non-users during the heroin epidemic, she reported that 35 per cent of Army men leaving Vietnam in Sept. 1971 had tried heroin at least once during their year there. Twenty per cent of the men believed that they had taken enough heroin to be "strung-out" at some time during the year; 12 per cent were still using heroin up to the time of their departure from Southeast Asia. Nevertheless, only 1.3 per cent of those who had used heroin in Vietnam considered themselves narcotics-dependent one year later. This estimate was confirmed by an unannounced urine test taken at the time of the interviews. If one projects the percentages to the total number of Army enlisted men who served in Vietnam during the epidemic, he can arrive at a "worst possible" estimate of some 4,000 heroin-dependent dischargees in the United States. Actually, since many of the total served when the rate of heroin exposure was relatively low, the evidence is that there presently are 2,000 to 3,000 such dependents. The Robins survey also revealed that most of these men had been users prior to going to Vietnam.

The military has now shown that in a population of susceptible young men in an area where heroin is freely available, a drug epidemic can be halted and the incidence of usage rapidly reduced, if only proper prevention, identification, treatment and rehabilitation techniques are employed by a leadership strongly determined to bring these young men back to a useful, productive life. Overall, drug abuse in the military has been reduced to a level considerably below that which is found in comparable age groups in civilian society. The application of the military's successful techniques to the rest of the country might well help us reduce one of our most terrifying health problems—a problem that affects predominantly the younger people in whom our hopes for the future rest.

In addition to the general lessons learned from Vietnam, there were some unusual health situations that bear consideration. One of them involved the returned prisoners of war. The medical handling of these men evolved from two years of intensive planning by the Office of the Assistant Secretary of Defense for Health and Environment and the offices of the three surgeons general. Records of returnees from the Oriental prison camps of World War II and the Korean War were studied carefully. Families of the present prisoners were then counseled and, to the extent practicable, were involved in the planning process in order to prepare them for their role in caring for the kind of physical and psychic abnormalities found in prisoners from the previous wars.

Upon their release, the POWs were examined initially at the Clark Air Force Base in the Philippine Islands. They received more detailed diagnosis and necessary preliminary treatment in hospitals near their homes. Reexamination was done after 90 days of convalescent leave and again six months after their return. There will be further examinations on the anniversaries of their return and as needed thereafter. Whether or not these men remain in service, they and their families will be followed for at least five years. Examination results have shown the expected signs of malnutrition and undertreatment of injuries, plus the parasitic diseases that had been prevented in fellow servicemen who remained under American control. Most of these physician disorders were relatively easy to treat, but some of the injuries will be permanent. The psychic problems caused by the long imprisonment and prolonged separation from the family are a far more difficult challenge; many of these will persist for years and require long-term assistance.

The medical lessons from Vietnam extend beyond this article and are being published in book form by the military. This article has confined itself to the ones that have a salient civilian application. A most important general lesson from the Vietnam war is that military medicine, even when it is practiced half a world away, is still an integral part of this country's total health care.

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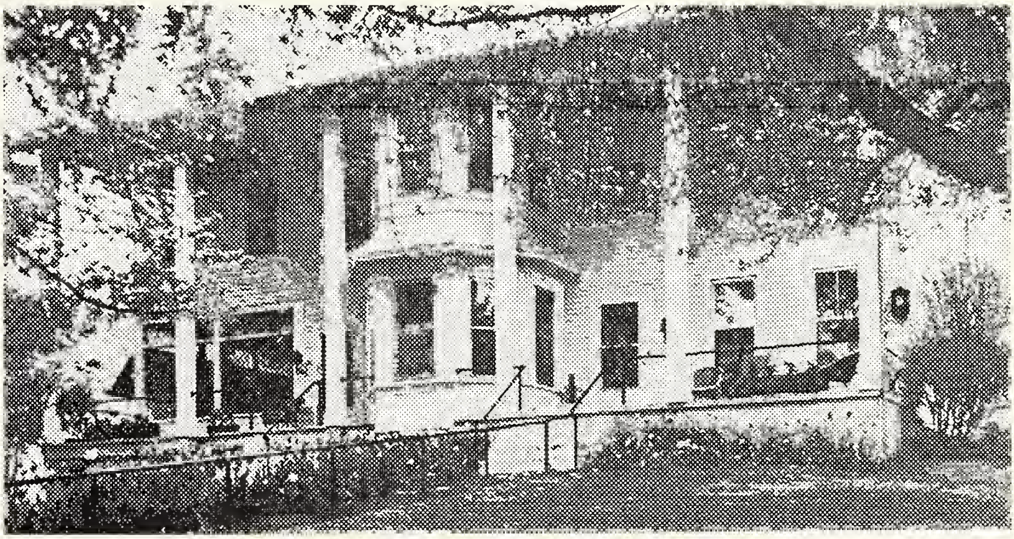

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Talk or Terminal Care?

Edward F. Dobihal, Jr., Ph.D.

Introduction

St. Christopher's Hospice, a 54-bed facility in London, England, and St. Luke's Hospice, a 25-bed facility, are the prototypes for the Hospice currently being planned for construction in Connecticut. These two English facilities have demonstrated the viability of a comprehensive program, including home care and inpatient care, for terminally ill patients with approximately three months or less to live. These programs are for the patient and family, with multiple services provided by an interdisciplinary staff, and with a consistency of service by persons dedicated to the goal of maintaining a quality of life that is satisfying to the patient until death. Ongoing work with the bereaved is seen by the English programs as preventive health care and this will also be emphasized in Hospice, Inc.'s program.

Talk or Terminal Care?

Recently there has been an increasing amount of attention paid to death and dying as a significant part of the process of living. This has been noted in the increased number of articles and books written for professional and public consumption, by T.V. and radio time devoted to the topic, as well as symposiums, special lectures, and a few seminars beginning in medical schools and medical facilities. All of this is positive, for death and dying have been taboo topics for too many years. They have finally begun to surface and we have discovered the overwhelming concerns of both the lay public and health care workers to consider what is often being called, "Death with Dignity."

There is a danger, however, in this suddenly increased interest in a long taboo topic. Too often such topics become fads, are highlighted for a brief period of time, and then the interest shifts to new fields of exposure. Death and dying are too important to be relegated to that usual process. There need to be endeavors to provide the best kind of terminal care to patients and their families, opportunities for health workers to learn from the terminally ill and the bereaved, and attention paid to the personal attitudes that we have developed about death that may be standing in the way of providing the best care, both medically and humanely, to the dying.

The need for "talk" about death and dying continues, but we also need to begin to do some things that will enable us to improve terminal care. This country is behind the developments in England, particularly at St. Joseph's Hospice, St. Christopher's Hospice, and St. Luke's Hospice, where care, research, and education are already proceeding. Attention to this kind of care does not negate acute treatment, chronic and rehabilitation medicine, or efforts to discover "cures" for various diseases. It is time, however, that we stopped denying the need for terminal care and continuing the myth that somehow scientific medicine will defeat death and provide an escape from death as the natural end of our lives.

There is a gaping void in our health care delivery system. From the patient who is terminally ill and in an acute general hospital you often hear statements like, "I don't belong here. I'm not getting any better. But I don't know where I belong." "I must be a disappointment to my doctors and everybody. I'm not getting well like you're supposed to. Why don't they just take me out and shoot me?" To feel unwanted, like a misfit, to sense that you are a disappointment to others, is no way to positively deal with the end of one's life.

The terminally ill patient will often fear the two possibilities that he has noted in the treatment of other patients with similar chronic degenerative disease. The first possibility is that he will become quietly isolated, that communication will decrease, and that he will be left alone, usually in a room at the end of the hall, nobody willing to maintain the openness and support that is so important if he is to live out the end of his life with hope and in meaningful relationships. The second feared possibility is that the patient will be subjected to painful, uncomfortable and demanding procedures that might prolong existence but not a desirable quality of life. Hopefully these fears of the terminally ill patients and their families can be decreased as we health workers more adequately deal with our own fears of death and dying and no longer need to withdraw from such patients or engage in heroic but hopeless treatment measures.

Terminal care is the antithesis of the attitude conveyed when we say, "There is nothing more we can do." It is true that we must begin to learn much more about what the "doing for" a terminally ill patient

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and the family entails. This is why the group of professional and lay persons who comprise the organization called Hospice, Inc., are devloping a program to provide terminal care in the greater New Haven area as one model in this country.

The Hospice — A Solution

Hospice, Inc. is a non-profit corporation in the State of Connecticut with a volunteer membership of health professionals and community persons who have organized to plan, design, and implement a coordinated program of health care for the terminally ill. The program is planned to be a demonstration model for service, a training center to develop manpower, and a research center primarily in the fields of dying and bereavement but also which will provide data on other types of health care problems. This is a unique endeavor in the United States and considering the tremendous need of terminally ill patients and their families is long overdue.

In several grant proposals Hospice, Inc. has stated, "After three years of work with patients in existing health facilities, we conclude that there is a need for a health delivery system to help patients round out their lives and live with meaning although they are dying of a degenerative irreversible disease, a system of care which will offer a less expensive alternative to care that is now primarily based in acute hospital. We have decided to establish such a system and call it Hospice. It will include care at home and in an inpatient setting designed to meet family needs as well as patients'."

The word Hospice means a community of people with a common goal — to care for travelers on the way. We chose the name because it is most appropriate for the person resting and finding refreshment and renewal in concluding the journey of life. We also chose the name because of its international usage since several of our group have visited and studied at St. Christopher's Hospice, a terminal care facility in London, learning much that has helped us in our philosophy and planning.

The planning group has stated their philosophy in part as follows:

> "The professional and scientific knowledge of nursing and medicine combined with this reverence for life and its spirit, serve to help the staff understand the experiences of the patient and his family to relieve their distress. We find that this type of care increases the capacity of the patient and his family to live through this period with meaning and dignity. It is important to discover the patient's and family's life style so that we can adapt to them and help them include this experience of dying and bereavement in their life, in their own way. The patient and his family, therefore, assume active roles in the decision-making processes. They also become teachers for other patients and families and for staff members seeking to be more understanding and helpful during this moment of crisis in life experience. Thus, the work of the Hospice is shared among patients, families and staff, all cooperating in the caring task.
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> "Persons helping terminally patients round out their lives expend tremendous energy; this needs replenishment. Patients and families help with this replenishment, but since they come and go, there is need to recognize the importance of the ongoing relations of the Hospice workers to one another. This is the Hospice family which welcomes those in need, serves them and helps them on their way. This family, in its openness and concern for all members, is what sustains. It is necessary for all in the Hospice to be both strong and weak, giver and receiver, and to be strengthened by bond between people and not only one's internal resources."

There were several reasons for the encouragement to establish a new program and facility which I will briefly describe:

Coordinated Terminal Care: With the advances in medical science there has been a necessary increase in specialization. The terminal patient-family often falls between the specialists and experiences extreme anxiety because of the lack of integration between medical specialties, between physician and nurse, and in providing social planning and providing psychological and spiritual support. At a time when a patient-family are attempting to bring life strands together, to conclude a whole life, they are often experiencing a destructive inconsistency and divisiveness. Consultants strongly encouraged a new program with common values, a small staff where much role blurring could occur because of mutual trust, and where consistent support could be offered by a coordinated, collaborating staff.

Conflicts of goals — "cure" versus death as the end point: Acute hospitals and extended care facilities give their highest priorities to "cure" or control of disease so that the individual with the disease can continue to cope with life as productively as possible. Medical insurance basically supports this disease treatment process. However, as Lerner points out,

> "One of the most significant changes in the mortality experience of this country since 1900 has been the decline in the major communicable diseases as leading causes of death and the consequent increase *in relative importance* of the

> so-called chronic degenerative diseases, that is, diseases occurring mainly in later life and generally thought to be associated in some way with the aging process."

At some point in this degenerative process "cure" and even rehabilitation become impossible goals. To continue to apply those goals is to mistreat the patient-family. The goal of sustaining the patient-family demands a new type of care, accepting that the end of such care will be death, but that that will not be defeat.

Defining Patient-Family as the unit for care: This concept has applications for much of health care but nowhere is it more important than in terminal care. For example, in the processes of dying and bereavement it is extremely important that relationships are lived out and concluded as productively as possible. Neither the physically ill person nor the family should be so separated by the treatment milieu that they are forced to abortively terminate their relationships.

Hospice will continue to include family members as important members of the team when the patient is at home or in the inpatient facility:

1. To train them to participate in treatment.
2. To encourage them to do such things as continue to cook special meals for the patient (very important for ethnic groups and to stimulate appetite).
3. To have unlimited visiting so that the total family unit *including children* can participate.
4. To provide special space for families to meet each other and space for family members to live-in when death is imminent.
5. To provide special social and educational programs for the family-patient, including continuing those plus visitation for the family after death has occurred. The latter is a prime area for research in a preventive health field since studies show greatly increased mental and physical trauma, including early death, when the bereaved are compared to a control population.

This emphasis on Patient-Family also means that they will be very involved in teaching the staff of their needs and in the decision-making regarding their treatment. To assist the Patient-Family to utilize their own life style and to maintain a sense of their own responsibility while receiving supportive service will develop interdependence that is much more dignified and elevating to the ego than the type of dependence and regressive behavior we now often force upon patients. This also will be imimportant research data, available because of this concentrated population, to be applied to other treatment modalities.

Any new part of a health care system does not effectively work in isolation, but if it is to be most useful to the person in need it must be integrated into the total fabric of the health care system of the community. Hospice, Inc., is attending to this by including a large number of people, health professionals from all disciplines and lay people from the community, on the task forces carrying out the planning. Approximately 250 community people have been working on the following six task forces:

1. Patient-Care
2. Building and Site
3. Community Relations
4. Professional Relations
5. Finance
6. Research

Since many of these individuals have important primary responsibilities in the acute general hospital, the university teaching hospital, the V.A. hospital, the V.N.A., community medicine, nursing homes, or community agencies in Greater New Haven, the planning takes cognizance of all these resources. Hospice will meet unmet needs of the terminally ill and their families in collaboration with the other facets of the health care system.

These identified unmet needs require both a home care program which began in January of 1974 and a facility to be opened in late 1975 or early 1976. Particular medical expertise in pain control, the management of nausea and other symptoms, maintenance of alertness and mood will be stressed and pharmacological consultation and research will be important. Expert physical nursing care will be given, but in addition nurses will be specifically trained to attend to the personal and interpersonal dynamics of the patient and the family. Social work, psychiatric consultation, clergy services, and volunteer activities will be offered to support patients and families and to include them in an ongoing living process designed to maximize their valuable contribution and participation rather than to make them dependent recipients of medical "fate."

It is the latter that makes a new facility most necessary. Many times it has been stated that most facilities for health care are designed for practitioners rather than patients. This facility will have to counteract that and take seriously the needs of both plus families. The design will concentrate on meeting the need of patient-family to feel at home, to belong, to be able to continue to achieve a balance in privacy and community, both of which are sought. Patients, even when confined to bed, will be able to have mobility so that they can enjoy the outisde, the "common room," small group dining, tea with family and friends. Staff will be visible, not only when attending to an individual, but in carrying out most of their activities so that patients and families will not feel isolated and alone if they are not receiving specific attention. Cooking and housekeeping will not be separate support services distantly removed from the patient-family. Small snack kitchens will be available to families and housekeepers will be helped to relate to patients and families not merely to clean rooms.

To carry out the above program means a small facility and we will begin with approximately fifty beds. It also means a dedicated and competent staff that will not be afraid of knowing each other, supporting each other, and blurring roles so that there can be a shared effort rather than jealously guarded "turf" by any professional group.

Finally, it means a sense of vision coupled with the recognition that such a program is not utopia. We will plan carefully but will err. We will intend to be helpful but will make mistakes and will discover that even success in this field will involve us in the pain of grief. We have to carefully balance the science and art of care, and tensions will exist between the two. The world will not be made perfect for those who are dying nor those continuing to live, and Hospice will not be a perfect world. But Hospice will be a place where we can give some patients and families the best care we can devise, where we can learn and improve, and where we can share our discoveries with others who will be serving the terminally ill in other health care systems.

One of my dying friends in the Hospice in England said, "You know it's good to be in this place where I belong. Where I felt welcomed. Where people care — even love me. A place where people have time to share with me. They're never too busy for a smile, a word, or to sit down and hold my hand, even cry with me. So you've come all the way from America to learn from us. Well, go back and if you don't have places like this, start one for people like me." I heard her request on behalf of others, pray to God daily to help us to meet it, and share it now with you.

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Chronic Hemodialysis Patients in Connecticut

(First of two parts)

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I. Introduction and Objectives

Kidney disease affects eight million Americans and results in about 60,000 deaths each year.[1] Published reports estimate that there are three million Americans with unrecognized and undiagnosed kidney disease, that kidney-related diseases of the genito-urinary system are the second highest cause of work loss in the nation, and that kidney disease ranks as the country's fourth major cause of death responsible for more deaths than caused by automobile accidents.[2]

There has been an upsurge of research efforts and treatment programs for kidney disease within the past five years. At the national level, Congress appropriated money to establish demonstration programs with the Community Health Services and Facilities Act. The Veterans Administration activated nearly 45 hemodialysis programs over the past seven years in its various hospitals throughout the country. More recently, Congress passed P.L. 92-603 (Social Security Amendments of 1972) which undoubtedly will have significant impact on financing care for individuals with chronic and renal failure.

An initial assessment revealed that little information was available about patients in Connecticut who require chronic hemodialysis therapy. The primary objective of this study is, therefore, to describe and characterize this patient population.

II. Methods

Data collection was undertaken by means of: (1) a mailed survey questionnaire; (2) interviews with facility professional and administrative staff; and (3) abstracting patient records. The survey questionnaire provided a general profile of each facility with operational chronic kidney disease treatment capabilities. The survey universe consisted of 36 Type I (acute general and special) hospitals, two Veterans Administration Hospitals, and other facilities in Connecticut identified as having chronic dialysis capabilities. The study provides information on a time period that approximates seven years, from January 1, 1966 through November 30, 1972. The following agencies were helpful in identifying programs and activities concerned with this project: Connecticut Hospital Association; Connecticut Hospital Planning Commission; Connecticut State Department of Health (Comprehensive Health Planning Agency, and the Division of Hospital and Medical Facilities); Connecticut Regional Medical Program; and the Kidney Disease Foundation of Connecticut

III. Results

Since the inception of the first program in 1966, there were 353 chronic hemodialysis patients treated in Connecticut. Of this number, 29 percent (103) died), 11 percent (37) had functioning transplants, and 60 percent (212) were being serviced as of November 30, 1972; information was unavailable for one patient. Table 1 presents a chronology of patients during the study time period.

The 212 patients active as of November 30, 1972 represent a point prevalence of 69 per million population. During the first 11 months of 1972, the incidence of patients entering chronic hemodialysis programs in the state was about 43 per million population. This rate exceeds the expected number of additional patients per year (33 per million) requiring long-term dialysis as extrapolated from the Gottschalk Report.[3] During the study time period, the influx of new patients increased by an average of 52 percent per year although the demand for services increased an average of 62 percent per year.

The percentage of patients removed from dialysis through renal transplantation declined, although the absolute number of transplants increased.

Residence of Patients

Table 2 presents data showing the number of patients who reside in the 10 hospital service areas (HSA) as defined by the State Department of Health. The relationship between patients and hospital service area is that of residence, *not* where patients received dialysis treatment. The greatest number of patients resided in the Capital HSA, followed by the South Central and Greater Bridgeport areas.

Case load rate per 100,000 population was determined using 1970 population data and the number of patients active as of November 30, 1972. The

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TABLE 1

END-STAGE RENAL DISEASE PATIENTS SERVICED BY CHRONIC HEMODIALYSIS PROGRAMS IN CONNECTICUT, 1966-1972

Year	*New Patients (1)*	*Patients Carried Over From Previous Year (2)*	*Deceased Dialysis Patients (3)*	*Successful and Decreased Transplant Patients (4)*	*Patients at Year End (1+2-3-4)*
All years	353	—	—	—	—
1966	1	—	—	—	1
1967	10	1	—	—	11
1968	26	11	9	4	24
1969	40	24	14	7	43
1970	69	43	20	11	81
1971	76	81	24	13	120
1972	131	120	22	17	212

TABLE 2

NUMBER OF PATIENTS AND CASE LOAD PER 100,000 POPULATION BY PATIENT RESIDENCE GROUPED ACCORDING TO HOSPITAL SERVICE AREA

		Chronic Hemodialysis Patients[2]		
			November 30, 1972	
Patient Residence Grouped by Hospital Service Area[1]	*Connecticut Population (1970)*	*1966-1972 No. of Patients*	*No. of Patients*	*Case-Load /100,000 Population*
Connecticut State—TOTAL	3,031,709	353[3]	212[4]	6.9
Greater Bridgeport	311,130	56	32	10.2
Housatonic Valley	140,821	20	13	9.2
S. Central Connnecticut Valley	586,017	75	49	8.4
Central Naugatuck Valley	218,731	37	15	6.9
Capital	895,480	95	60	6.7
Southeastern	266,544	18	14	6.2
Southwestern	333,935	24	16	4.8
Mid-State Connecticut River Estuary	114,816	9	5	4.3
Windham—Northeastern	123,337	7	4	3.2
Litchfield Hills—Northwestern	80,898	7	1	1.2

[1] As designated by the State Department of Health.
[2] Relationship between patients and hospital service area is one of residence, *not* where patients received dialysis treatment.
[3] Includes 5 patients not residing in Connecticut.
[4] Includes 3 patients not residing in Connecticut.

rate for the state was calculated at 6.9 per 100,000. Four of the 10 HSAs equalled or exceeded the state rate (Greater Bridgeport, Housatonic Valley, South Central Connecticut Valley and Central Naugatuck Valley).

Patient Age

The age distribution for patients is shown in Table 3. Concerning all patients during the study time period, well over one-fourth of the population were under 35 years of age; well over half the population were under 45, and over two-thirds were under age 49.

Slightly over 5 percent of the entire study population were of school age (5-19). Patients in their twenties, represented 14.4 percent of the population; individuals aged 30-39 constituted 18.2 percent of the patients. The largest grouping of patients was found in the 40-49 age category; they represented almost 31 percent of the study population. Persons in their fifties accounted for 23.5 percent; persons aged 60-64 represented 5.4 percent and those 65 or over constituted 2.6 percent.

Over the past several years, hemodialysis programs in the state seem to have provided services to an increasing number of patients aged 55 and over.

TABLE 3

NUMBER, PERCENTAGE AND CUMULATIVE PERCENTAGE DISTRIBUTION OF PATIENTS BY AGE

	Patients during 1966-1972[1]				*Active Patients as of November 30, 1972*[2]			
			Cumulative				*Cumulative*	
Age	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*	*Number*	*Percent*
0-4	0	0.0	0	0.0	0	0.0	0	0.0
5-9	2	0.6	2	0.6	1	0.5	1	0.5
10-14	4	1.1	6	1.7	3	1.4	4	1.9
15-19	12	3.4	18	5.1	6	2.8	10	4.7
20-24	24	6.8	42	11.9	15	7.1	25	11.8
25-29	27	7.6	69	19.5	15	7.1	40	18.9
30-34	32	9.1	101	28.6	16	7.5	56	26.4
35-39	32	9.1	133	37.7	23	10.8	79	37.3
40-44	62	17.6	195	55.2	32	15.1	111	52.4
45-49	47	13.3	242	68.6	26	12.3	137	64.6
50-54	56	15.9	298	84.4	38	17.9	175	82.5
55-59	27	7.6	325	92.1	20	9.4	195	92.0
60-64	19	5.4	344	97.5	10	4.7	205	96.7
65-69	7	2.0	351	99.4	5	2.4	210	99.1
70-74	1	0.3	352	99.7	1	0.5	211	99.5
75-79	1	0.3	353	100.0	1	0.5	212	100.0
80 and over	0	0.0	353	100.0	0	0.0	212	100.0

[1] N = 353; Mean = 42.9; Variance = 175.3; Standard deviation = 13.2.
[2] N = 212; Mean = 43.6; Variance = 180.1; Standard deviation = 13.4.

This appears as one indicator reflecting the moderation of criteria used to determine suitability for chronic hemodialysis therapy in Connecticut as well as nationally. Of additional importance, nearly two-thirds of the patients serviced in Connecticut are in what is generally referred to as the most productive years of life (ages 35-55). The mean patient age was about 43 years.

Sex and Race

Of the total 353 patients over the seven year period, 60 percent (211) were males and 40 percent (142) were females. There was a slight change in the sex distribution for active patients (those receiving services on November 30, 1972); the male distribution decreased to 57 percent (120) and the female distribution increased correspondingly to 43 percent (92). As of January 1, 1973, the National Dialysis Registry reported 64 percent males and 36 percent females. Connecticut's experience indicates that there is a higher proportion of females and a lesser proportion of males receiving dialysis than is true for the national average.

Table 4 presents the patient distribution by race and ethnicity. Eighty one percent of all the patients in the population were white compared to 19 percent who were non-white. A slight change in the distribution is shown for the 212 active patients; the proportion of white patients decreased to 78 percent with a corresponding increase to 22 percent in the non-white patient population. Of the patients who died, 83 percent were white and 17 percent non-white.

Although not shown in the tables, analysis of end-stage renal disease patients compared to Connecticut population data indicate that non-whites represented a higher proportion than whites compared to their numbers in the general population. Non-whites also tended to be younger than whites. The study data also indicate that women may develop end-stage renal disease at an earlier age than men.

Type of Treatment and Length of Time in Dialysis

Distribution of patients by treatment modality is shown in Table 5. By far, the greatest percentage of patients received in-center dialysis (over 83 percent between 1966 and 1972). As of November 1972, there had been an increase in the percentage of patients being dialyzed at home; the percentage increased from 16.4 over the study period to 21.7. Of the patients who died, 95 percent received in-center dialysis and 5 percent were dialyzed at home.

Males utilized home dialysis to a greater extent than females. Similarly, whites used home dialysis more than non-whites.

Data regarding length of time in dialysis were analyzed for patients in active dialysis as of November 30, 1972. The mean dialysis time for these 212 patients was 17 months; median period of time was

TABLE 4

NUMBER AND PERCENTAGE DISTRIBUTION OF PATIENTS BY RACE AND ETHNICITY

Race or Ethnicity	*1966-1972*		*November 30, 1972*		*Deceased Patients*[1]	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
TOTAL	353	100.0	212	100.0	103	100.0
White	286	81.0	166	78.0	86	83.0
Puerto Rican	(7)	(2.0)	(3)	(1.0)	(2)	(2.0)
Non-White	67	19.0	46	22.0	17	17.0
Black	65	18.4	44	21.0	—	—
Oriental	1	0.3	1	0.5	—	—
American Indian	1	0.3	1	0.5	—	—

[1] 1966-1972.

TABLE 5

NUMBER AND PERCENTAGE DISTRIBUTION OF PATIENTS BY TREATMENT MODALITY

Treatment Modality	1966-1972		November 30, 1972		Deceased Patients[1]	
	Number	*Percent*	*Number*	*Percent*	*Number*	*Percent*
All modalities	353	100.0	212	100.0	103	100.0
In-center[2]	294	83.3	165	77.8	98	95.1
Home[3]	58	16.4	46	21.7	5	4.9
Limited care[4]	1	0.3	1	0.5	—	—

[1] 1966-1972.

[2] Treatment carried out in a dialysis center where therapy is provided by a trained staff who are completely responsible for the administration and monitoring of the patient's dialysis.

[3] Performed in the patient's home by the patient and usually with a family member assisting after appropriate training.

[4] Patient is trained to do essentially the same procedures performed by home dialysis patients, but care can be carried out in such locations as physicians' offices, community hospitals, clinic buildings, etc. The patient is usually assisted by trained personnel. This type of care is usually provided patients who may not be physically or psychologically suitable for home care or who do not have an environment that would support home dialysis.

11 months. One patient had received dialysis therapy nearly six years (68 months). No differences were found for relationships between months of dialysis and age, sex, race.

Rehabilitation

In a gross attempt to obtain some insight into the response of persons to hemodialysis therapy, patients were rated in terms of their rehabilitative activities; ratings were based on a scale from 1 to 5. A score of 5 indicated the optimal level of rehabilitative activity an individual would be expected to obtain given his medical and psychological limitations. A rating of one represented no rehabilitative effort on the part of the patient, and an assessment of three indicated a moderate level of activity. Ratings were undertaken by professional staff and were predicated on a consensus of their judgments of each patient's rehabilitative activity obtainment.

It is acknowledged that the resulting data are only gross indicators. Statistically, no significant difference was found between ratings given younger (<50) and older (>50) patients. Several head nurses, however, commented that older patients seem to adjust psychologically to dialysis more quickly than younger patients.

Analysis of activity assessment data showed statistically significant differences in the ratings of males and females, whites and non-whites. Males appear to obtain a higher degree of rehabilitative activity than females; whites appear to have obtained a higher degree than non-whites. Further research is suggested, due to the general approach taken in this aspect of the project.

Transplantation

Among the 353 patients treated in chronic hemodialysis programs in Connecticut, 70 (20 percent) received kidney transplants; there were 37 (53 percent) successful transplants. Of the 33 (47 percent) unsuccessful grafts, 15 died (45 percent) and 18 (55 percent) returned to dialysis. Sixty-one (87 percent) of the transplanted patients utilized in-center hemodialysis programs; eight (12 percent) dialyzed at home.

Of the 70 patients receiving transplants, 64 (91 percent) were 50 years of age or less. There were 38 males (54 percent) and 32 females (46 percent). Fifty-eight (83 percent) of the patients were white compared to twelve (17 percent) who were non-white. No statistically significant differences were found in terms of age, sex or race as related to success or failure of transplants. Similarly, no statistically significant differences were discovered between age, sex and race among the unsuccessful transplant patients who died or returned to dialysis.

Data were obtained on the number of months that transplanted kidneys had functioned. The mean period for functioning kidney transplants was 17 months, identical to the mean number of months for patients on dialysis; the median functioning time was about 12 months. The longest survival time was over four years (53 months). No statistically significant difference was found between the average survival time for males (15.4 months) and females (21.2 months).

IV. Summary and Discussion

Patients on chronic hemodialysis are widespread throughout the state. Patients reside in each of the 10 hospital service areas (HSA). Although dialysis programs exist in many of the HSAs, some individuals journey out of the HSA in which they reside to receive care; additional details on this point are forthcoming in the subsequent article.

A caseload rate of 6.9 per 100,000 population was found for the state as a whole. If this figure is used as a planning indicator, attention is then focused on the HSAs which exceed the state rate. Three areas exceed the state average: (1) Greater Bridgeport with a rate of 10.2/100,000; (2) Housatonic Valley, 9.2/100,000; and (3) South Central Connecticut Valley, 8.4/100,000. The Central Naugatuck Valley HSA equalled the state rate of 6.9. If evaluation and planning priorities are to be developed, it seems logical to assess the availability of services, especially in these health service areas.

From an age standpoint, persons receiving hemodialysis in Connecticut are approximately similar to the national average in that the majority are in their productive years. These findings serve to underscore the importance of including rehabilitation as a major component of end-stage renal disease treatment programs.

Additional research seems necessary in the area of rehabilitative activity assessment. The methods used in this study admittedly are general and superficial. Appropriate assessment techniques need to be developed. Once they are tested and subsequently used, they will provide additional measures of patient progress.

It was found that the percentage of patients removed from dialysis through renal transplantation declined; however, the absolute number of transplants increased. This appears to be an indicator that renal transplantation has not kept pace with the increasing dialysis population. According to many of the interviewed nephrologists and surgeons in Connecticut, a major reason for this can be attributed to the unavailability of kidneys from suitable donors. Obtaining an adequate number of kidneys suitable for transplantation appears to be an issue worthy of serious consideration.

Patient information of the type presented in this paper is necessary as a basis for future evaluation of the effects of end-stage renal disease and of the impact of chronic hemodialysis programs. Assessment cannot be undertaken without understanding the breadth and depth of this complicated disease. It is hoped that the data in this paper plus information on the chronic hemodialysis programs in Connecticut, which is the topic of a subsequent paper, will provide insights required to evaluate existing activities and services for individuals with end-stage renal disease.

(This is the first of a series of two articles). End of part I.

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American Doctors in the Crimean War

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From 1854 to 1856, Russia was embroiled in the Crimean War opposing the Ottoman Empire (Turkey), England and France, who were joined by the Italian Kingdom of Sardinia. Nowadays, few people remember anything about that war, beyond the battle of Balaklava, immortalized in Lord Tennyson's poem, *The Charge of the Light Brigade,* and the fact that Florence Nightingale and her band of nurses served at the siege of Sevastopol. Hardly anyone, in the United States or in Russia, has ever heard of the 36 young American surgeons who volunteered to serve on the Russian side. Most of them were involved in the siege of Sevastopol; half of them perished in Russia during the War. Their sacrifice should be remembered as it has some significant facets.

It is, first of all, a striking testimony to American regard for Russia at that time, despite the great difference between the two countries. The young men served as assistants to the great Russian surgeon, Dr. N. I. Pirogov, author of the pioneering *Basics of Military Field Surgery* and father of modern military medicine.[1] Lessons they brought back were taught first in the University of Pennsylvania Medical School and then were applied during our Civil War (1861-65).[2]

They brought the use of women nurses, an important Russian innovation in military medical practice, back to America. This, too, was applied in our Civil War. The American doctors were assisted in the Crimea by detachments of Russian women nurses, selected and trained for hospital service, who worked in beleaguered Sevastopol the greater part of a year before Miss Nightingale reached the battlefield with her selfless but largely untrained English women volunteers.[3]

In the first half of the nineteenth century, European and American military surgery was roughly comparable to that of the Greeks and Romans. Lord Lister did not introduce the practice of antiseptic surgery until 1885—too late for the Crimean conflict or our Civil War. Immunization against cholera and typhus came two decades after that.[4] Neither the United States nor Russia had any medical schools with the prestige of the University of Paris in France. Dr. Pirogov studied there, as did many medical students from America. A number of these were Crimean volunteers.

A modern chronicler, E. Dvoichenko-Markova, ascribes their willingness to volunteer to their wish first of all to obtain a great deal of surgical practice in a short time, and secondly to the considerable amount of money which the Tsarist Government was offering to contract surgeons with good European training.[5] It could also be added that Americans took a sympathetic view of Russia in the pre-Civil War era. In part, this was due to Anglophobia. To Americans schooled in the history of the Revolutionary War and the War of 1812, any enemy of England seemed a natural ally. Thousands of Irish immigrants were crowding into the country, adding to anti-British feeling.

Furthermore, the *casus belli* of the Crimean War was Tsar Nicholas I's desire to intervene in the Ottoman Empire to protect the Christian holy places in and near Jerusalem, and to obtain free and secure access to them for Christian pilgrims. To put pressure on the Turks, he occupied some Balkan territory which had been part of the Ottoman Empire. The British and French had responded to this threat to the balance of power in Eastern Europe and opposed the Tsar. Turkish cruelties and misrule in their Empire were notorious, and the efforts of Greece and other East European countries to win their independence in the 1830's and 40's had aroused enthusiastic popular support in the United States. Russia seemed to be on the side of civilization. Finally, our Mexican War was fresh in the public memory, the martial spirit was still keen, and interest in the Crimean conflict as a spectacle ran high.[6] These various factors made the actions of the American doctors less surprising than they would otherwise seem today.

Indeed, Russia received some even more surprising offers of aid than that of the doctors. Three hundred Kentucky riflemen wanted to prove their expert marksmanship on the Tsar's enemies; and a group of private American shipowners went to St. Petersburg, the Russian capital, with an offer to organize a flotilla under the Russian flag in the Pacific. In order not to violate American neutrality Russia had to turn these proposals down.[7]

Most of the American doctors managed to reach Odessa, on the Black Sea, before the British and French fleets succeeded in blockading the port. Here, an energetic Russian citizen of Greek descent named John Ralli served as American Consul—entirely without pay. He made himself extremely useful to the American doctors by storing their posses-

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sions for them at Odessa and assisting them to continue on to the Crimea or other destinations. He collected the letters and personal effects of those who died, and returned them to the doctors' families in the United States. He wrote regular reports to Washington on the progress of the war and activities of the doctors.[8]

Ex-Connecticut Governor Thomas Hart Seymour served as United States Minister to the Court of Tsar Nicholas I in St. Petersburg during the Crimean War. A collection of his papers has just been made public at the Connecticut Historical Society; perhaps their most important feature is his interest in the 36 American surgeons who volunteered for service with the Russian Army and served in the Crimea. At their request he interceded with the Russian Government to secure their employment and represented them when the Russians mislaid their diplomas or assigned the doctors in ways inconsistent with their contracts. He assisted in repatriating their personal effects, corresponded with their families in the United States, and contributed handsomely to a memorial at Simferopol to those who lost their lives.

As the mortality rate among the doctors rose he made efforts to secure their discharge from further service. Although these efforts showed every promise of success, the majority of the doctors did not elect to leave.[9] Some of the letters which they wrote to him from the front were discovered as late as the 1930's, still filed in the former U.S. Legation building in Leningrad.[10]

A Californian, Dr. King, and a Massachusetts man, Dr. Draper, arrived in Sevastopol, near the tip of the Crimean Peninsula, in the summer of 1854, in time to witness the first bombardments. King was soon transferred further inland, to Simferopol, and a third American, Dr. Turnipseed, took his place in Sevastopol. By the end of December the Russian Commander at Sevastopol had brought Draper and Turnipseed down from the northern edge of the city and installed them in his own home in the center of town. He bore the once-famous name of Osten-Saken, and lived near the handsome and impressive Noble's Club. This had been converted into a military hospital, and here the young American doctors worked. "It is a beautiful building," they wrote to Washington, "which does honor to the City and stands as its chief adornment."[11]

Count Lev N. Tolstoi, in "Sevastopol," gives a first-hand description of this hospital:

> "At the entrance soldiers are standing with litters. . .You walk into the great assembly hall. You barely open the door, and you are at once impressed by the sight and odor of 40 or 50 patients who are severely wounded or have suffered amputation, some on cots, but most on the floor. Do not trust your feeling which holds you back on the threshold of the hall . . .it is a wrong feeling; walk on . . .If your nerves are strong, now go through the door on the left: in that room they are putting on bandages and performing operations. You will see there doctors, with arms blood-stained up to their elbows, and pale, morose countenances, busy at a cot, on which, with open eyes and speaking, as though in delirium, meaningless but sometimes simple and touching words, lies a wounded soldier under the influence of chloroform. The doctors are occupied with the disgusting but beneficent work of amputation. You will see the sharp, bent knife entering the healthy body; you will see the wounded man suddenly come to his senses, with a terrible, piercing cry, and with curses; you will see the surgeon's assistant throw the amputated arm into a corner; you will see, on a litter, in the same room, another wounded man, who, watching the operation performed on his companion, writhes and groans, not so much from physical pain, as from the moral anguish of anticipation; you will see terrible, soul-stirring spectacles, but you will see war. . .in its real aspect, in blood, in suffering and in death."[12]

The operating room was set up in the billiard room of the club. Some of the tables were piled high with lint for sponges and bandages; the floor was crusted and splashed with blood. The patients were housed in the ballroom, once so gay and elegant. Now the groans of amputees replaced the music which had sounded there. Some of the badly wounded in the room. . .even amputees. . .were women and children from the shelled-out Ships' Quarter. Allied fleets had bombarded this Quarter where sailors' families lived with terrible effect.[13]

Elsewhere in his writings Tolstoi gives a fuller description of the ballroom after a bombardment:

> "A large, high, dark hall, lit only by four or five candles, with which the doctors proceeded to examine the wounded, was literally full. Stretcher bearers constantly brought in wounded and went for more, putting them down one after the other on the floor which was already so crowded that the unfortunates touched each other, and soaked each other with blood. Pools of blood were visible in unoccupied areas, and the hot breath of several hundred men and perspiration of the stretcher bearers produced a special sort of heavy, choking, stinking odor in which burned the candles at opposite ends of the hall."[14]

A contemporary account speaks of the Schneider Hotel where doctors from the hospital took meals. They "ran in here in their oilcloth aprons smeared with blood and dried scraps of meat."[15] Nor was the lack of sanitation confined to hospitals.

As early as the beginning of December 1854 Dr. Pirogov began to fear the outbreak of epidemics. In one of his published *Letters From Crimea* he observed to his family that the British buried their dead only 28 inches deep, and that animal entrails and droppings lay everywhere. He predicted that when hot weather arrived in the Spring, typhus would threaten everyone. He did not have to wait that long. Before Christmas one of the Russian doctors in Sevastopol had died of that dread disease.

At Simferopol where Dr. King was serving eight nursing sisters came down with typhus. On January 13, 1855, Dr. Pirogov wrote:

> "The sisters of the second unit arrived. The sisters of the first unit have all fallen ill with typhus and three have died."[16]

At the time this letter was written Dr. Turnipseed had contracted typhus in Sevastopol. His colleague, Dr. Courtney King, paid him a visit from Simferopol. Dr. Turnipseed was the first of the American doctors to fall victim to the epidemic, and one of the few to survive. Upon his return to Simferopol Dr. King received a transfer to Kerch', on the eastern tip of the Peninsula. There typhus was raging.[17]

On March 25th, Dr. Pirogov noted: "Almost half of our doctors are ill," and in April, "the doctors all fell ill, and many died before my eyes. All had typhus. I myself succumbed for four weeks. Typhus struck King in Kerch'."[18]

Writes Dvoichenko-Markova:

> "(Dr. King) was the first victim among the American doctors. He died March 19th, and the next day his friend Dr. Draper also died of typhus, in Sevastopol.
>
> King, a young and most-promising American doctor, died alone at Kerch', far from his country and relations. But the Russian Orthodox congregation took the sick American under its protection. When they buried the American doctor according to their rite. . .the clergy and full procession conveyed his remains to the grave. The Russian Government sent a letter of condolence to his family and later sent the last remains of King and Draper back to America, in accordance with the wishes of their families."[19]

From March 28 to April 8, 1855, Sevastopol underwent constant bombardment. Within that period the doctors had to perform nearly 500 amputations alone. American surgeon Whitehead took Draper's place, and there were other young American doctors who arrived with him. At the end of April the garrison of Sevastopol was reinforced, raising its strength above 100,000.[20] On April 22nd, Dr. Turnipseed referred to the especial violence of the bombardment which started on Easter Day, March 23, and lasted for eight days, but without effecting serious damage to the ring of bastions protecting the city; damage done by day was repaired at night. The city itself received nightly bombardment from the Allied fleet. He wrote

> "The night before last I was expecting nothing better than the house in which I have apartments (sic) would receive some of the unwelcome visits. A few nights ago the French blew up (ont fait sauter) their subterranean mine near the 4th bastion. They were at a distance of 50 Sagines. This wonderful combustion of powder however failed to have any effect on the 4th bastion. There were between 50 and 100 Russians killed however by the stones which fell in great numbers on the 4th bastion."[21]

On May 14th, Dr. Pirogov wrote that during two days and nights there were 2,000 wounded and 800 dead Russians, and among the enemy twice as many.[22] A few days later Dr. Whitehead notified Consul Ralli that in the fighting on May 26th the Russians lost 10,000 wounded and dead.[23] In May the Crimea started to get hot, and in place of typhus an epidemic of cholera broke out. A young American doctor from Aberdeen, Mississippi, McMillan, fell ill of cholera in Sevastopol and died within six hours. The next victim of the disease was Dr. Nicholas, working in Kherson, on the Dnepr River. Then in Simferopol, one after the other there died, Dr. Jones from Maryland, Dr. Deininger from Pennsylvania, Dr. Marshel from California, and Dr. Clark from New York. Dr. Stoddard fell ill there also, but recovered and departed for Berlin to recuperate. Not long afterwards his colleagues in Simferopol were distressed by the unexpected news that he had died suddenly in Berlin.[24]

The long agony of the siege of Sevastopol lasted eleven months—336 days. Throughout the summer of 1855 the conditions within the city grew steadily worse. The number killed was appalling—over 1,000 a day. During the last 28 days of the siege alone over 1,500,000 projectiles were thrown into the city. The cost in lives to Russia was probably 250, 000, and the expenditure of resources was beyond her means. On September 8, 1855 Sevastopol fell. The war dragged on for some weeks longer, but it had cost the Allies dearly also and they were in a mood to make peace. It was formalized in the Treaty of Paris, March 30, 1856. This treaty neutralized the Black Sea, admitted Turkey to the Concert of Europe, and drew from the Sultan of Turkey a firman protecting the rights of Christians residing in Turkey or visiting the Holy Land. The settlement secured for Russia her initial object of the war.[25]

Foreign doctors in the Russian service faced a good many obstacles. For the most part they were entirely ignorant of the language. They served in a peculiarly rigid Imperial Army, having voluminous and exacting regulations and cumbersome medical administration. It is conceivable that Russian doctors, who had not received a medical education in Paris but had acquired decades of experience, might have resented a spirited lot of young Americans. In their favor the Americans had the best skills their day and generation offered. They stuck to their posts in besieged Sevastopol under shell fire to the end, braving bombardment and the no-less-deadly hidden threats of cholera and typhus. Most served in central hospitals where their skills were especially needed. This was not because of a fear of forward areas, as Dr. Bostwick showed. Throughout the campaign he served a regiment of Russian Hussars as its Regimental Doctor. Brierly of Baltimore received high Russian decorations in the Crimean operations and even remained in Russian service after the war, serving in South Russia and Bessarabia.[26]

American doctors were stationed as far north as Kremenchug, in central Ukraine. Here Dr. Hart from Tennessee died of smallpox. They worked as far west as Odessa, Nikolayev, and Kherson; as far south as Simferopol and Sevastopol; and as far east as Kerch'. They endured danger and sleepless nights, serving the wounded under fire and the military and civilian victims of fearsome epidemics. They worked in nightmarish surroundings. Over half of them gave their lives for Russia.

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NOTICE TO CONTRIBUTORS

Members of The Connecticut State Medical Society reading papers before other organizations are requested to submit their papers to the JOURNAL for consideration by the Board of Editors for publication. Detailed instructions to contributors appear in the last section of *Connecticut Medicine* under "Guide for Authors." Adherence to the instructions will prevent delays both in acceptance and in publication.

Please send them to: J. Alfred Fabro, M.D., Editor
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SUMMARY OF PROCEEDINGS

HOUSE OF DELEGATES — ANNUAL MEETING

Hartford, Connecticut — April 30, 1974

Reports and Addresses

The House received reports, addresses and/or remarks from the President, the Secretary, the Treasurer, the Council, the standing Committees, Representatives and Advisors, the President of the Woman's Auxiliary to CSMS, the COMPAC Board of Directors and a full complement of delegates from state medical societies in Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, New York and New Jersey and from the Council of New England State Medical Societies. At the Annual Dinner of the Society on Wednesday, May 1, the incoming President, James H. Root, Jr., Waterbury, made his inaugural address. The addresses of Drs. Cramer and Root are published at the conclusion of this summary.

Election of Officers and Others

With minor amendment, the House voted to approve the published report of the Nominating Committee (the Council). The CSMS officers elected were:

*President: James H. Root, Jr., Waterbury.
President-Elect: Guy W. VanSyckle, Danbury.
Vice President: Hilliard Spitz, New London.
Secretary: Louis C. Backhus, Waterbury.
Treasurer: Carl W. Johnson, Thompsonville.
Speaker of the House: Kenneth F. Brandon, Hartford.
Vice Speaker: Timothy F. Nolan, Greenwich.

Delegates to AMA (1/1/75-12/31/76):
E. Tremain Bradley, Norwalk.
J. Alfred Fabro, Torrington.
Alternate Delegates to AMA (1/1/75-12/31/76):
Sidney L. Cramer, Hartford
Morris A. Granoff, New Haven
Councilor-at-Large: David A. Grendon, Sharon

*By succession.

Presentations and Awards

Presentation to Retiring President: In recognition of his high standard of performance as President of the Society during 1973-74, Sidney L. Cramer, Hartford, received an engraved silver bowl and a Past President's pin. These presentations were made by David A. Grendon, Sharon, Chairman of the Council.

Presentation to Incoming President: At the Annual Dinner on May 1, an engraved gavel, symbolic of the office, was presented to the incoming President, James H. Root, Jr., Waterbury, by the retiring President, Dr. Cramer.

AMA-ERF Grants: Provided by the American Medical Association's Education and Research Foundation, unrestricted grants were awarded as follows: To the Yale University School of Medicine—$5,089. Accepted for YUSM by Robert Berliner, New Haven, Dean.

To the University of Connecticut School of Medicine—$5,222. Accepted for UCSM by Robert U. Massey, Hartford, Dean.

These presentations were made jointly by Mrs. Norman Barker, AMA-ERF Chairman, Woman's Auxiliary to CSMS, and the President, Dr. Cramer.

Louis H. Nahum Memorial Award for Medical Writing: Established by the Council in 1973, this Award was presented to its first recipient, Mr. Allan B. Silken, senior medical student at the Yale University School of Medicine. In addition to receiving a plaque and a check in the amount of $100, Mr. Silken will have his winning paper published in an early issue of *Connecticut Medicine.*

AMA Certificate of Accreditation for Continuing Medical Education Programs: On recommendation of the CSMS Committee on Continuing Medical Education, the AMA Council on Medical Education issued certificates of accreditation for CME programs being conducted at the following Connecticut hospitals: Manchester Memorial Hospital, Manchester; Lawrence and Memorial Hospital, New London; Rocky Hill Veterans Home and Hospital, Rocky Hill; and Johnson Memorial Hospital, Stafford Springs. Certification qualifies these programs for credit toward the AMA Physician's Recognition Award for continuing medical education.

Principal Actions Taken

Continuing the procedure established several years ago, items of agenda business calling for action by the House of Delegates were heard by Reference Committees. The reports of the three Reference Committees were received and acted on as follows:

Reports of Reference Committee No. 1

(a) *Summary Statement on PSRO:* It was voted to approve the report and recommendation of the Committee that this subject "Summary Statement" be adopted by the House of Delegates as outlining the policy of the Society on Professional Standards Review Organizations at this time. The text of the statement follows:

"The Connecticut State Medical Society has recognized that the present law of the land requires that PSROs be formed and activated in the areas designated by the HEW Office of Professional Standards Review. The Society originally advocated a single, statewide PSRO for Connecticut, but when HEW divided the state into four PSRO areas the Society encouraged physician groups in those areas to plan and develop PSROs in compliance with the HEW designations. Further, by action of its House of Delegates, the Society has appropriated an estimated $30,000 to develop and establish a Connecticut Medical Institute which, it is hoped, may qualify for HEW funding as a PSRO "support center" as one of its principal functions.

"The interest of the Society in peer review as an appropriate mechanism for assuring high quality of medical services, optimum utilization and reasonableness of charges antedates the enactment of the PSRO law by several decades. The encouragement given by the Society to the development of effective peer review committees by local units of organized medicine, its participation in the initial planning of the role to be played by hospital utilization review committees in the screening of Medicare and Medicaid admissions and its formal activities to furnish peer advisements to the Connecticut administrators of Medicare and Medicaid in the area of ambulatory care services all attest to the longstanding interest of the Society in these matters. It is emphasized, however, that this interest has been directed, first and foremost, to assuring the high quality of medical services, with cost containment being looked upon as of great importance but, perforce, a secondary consideration.

"In light of the foregoing, and while the present position of the Society is one of seeking to comply with the PSRO law, several reservations are expressed as follows:

1. The Society is concerned that the practically limitless powers of the Secretary of HEW to impose regulations on the implementation of the PSRO law at all levels may result in the imposition of controls which may affect adversely the quality of health care, interfere with the traditional patient-physician relationship and hamper the free exercise of professional judgment by physicians in their practices.
2. The Society is deeply concerned that the confidentiality of patients' medical records be maintained in the PSRO systems and that adequate measures be instituted and adhered to in order to protect such confidentiality. In this regard it is aware that, in the past, the freedom of the press has protected the publication of medical and other information which has been obtained illegally. It is also aware that the present and previous administrations have been publicly accused of using legitimate governmental agencies to harass individual citizens. It is vital, therefore, that fool-proof methods of protecting this confidentiality of medical records be developed and widely publicized before PSROs are fully activated.
3. The Society seriously questions whether the cost-saving that may result from PSRO activities will not be substantially exceeded by the costs of operating the massive PSRO bureaucracy now in the process of being developed as a nationwide network.
4. The Society is in agreement with and supports the efforts of the American Medical Association to gain the enactment of amendments to the current PSRO law which would correct its several shortcomings and undesirable features, and, failing that, to actively seek repeal of the law itself."

(b) *Resolution re Repeal of PSRO Law:* Having received the report and recommendation of the Committee on this resolution, the House voted to table action on the resolution.

Reports of Reference Committee No. 2

(a) *Resolution re Definition of Cosmetic vs. Restorative Procedures:* It was voted to approve the report and recommendation of the Committee on this resolution (introduced by the CSMS Committee on Third Party Payments) that the subject resolution, with minor amendment, be adopted as follows:

RESOLVED: That the House of Delegates of the Connecticut State Medical Society adopt the position that a patient should receive the best restorative and reconstructive treatment (operative and non-operative) that medical science can achieve for the results of or consequences of accident, injury, disease or congenital deformity, including especially cancerous and pre-cancerous conditions, and that such restorative and reconstructive treatment is considered to be functional and *not* cosmetic; and be it further

RESOLVED: That this resolution be forwarded to the Annual Meeting of the House of Delegates of the American Medical Association.

(b) *Resolution re Policies of Third Party Payors re Psychiatric Care:* It was voted to approve the report and recommendation of the Committee on the subject resolution that the resolution, with amendment, be adopted as follows:

RESOLVED: That the House of Delegates of CSMS approve the policy that, in any third party payment program, psychiatric illnesses should be included on an even basis with all other medical illnesses treated by physicians; and be it further

RESOLVED: That patients requiring psychiatric care should be able to receive such care in a hospital or a private physician's office, of their own choosing, and not be specifically required to attend a clinic or mental health center for like services.

(c) *Resolution re Endorsement of Connecticut Regional Blood Program as Model for an Integrated Regional Blood Program:* It was voted to approve the report and recommendation of the Committee on the subject resolution that the resolution, with amendment, be adopted as follows:

RESOLVED: That the House of Delegates of CSMS recommend to the Secretary of the Department of Health, Education and Welfare, through the Assistant Secretary for Health, the Connecticut Regional Red Cross Blood Program as a tested model for an "integrated regional blood program" (published in the *Federal Register*, 3/8/74) and that the Connecticut Program, which now serves well the people of Connecticut, be used as the basis for structuring the integrated regional programs now being contemplated to meet the blood banking needs of the people of the United States.

(d) *Progress Report, Connecticut Ambulatory Care Study:* It was voted to approve the report and recommendation of the Committee that the subject report, submitted by the CACS Project Director, be received as information.

Reports of Reference Committee No. 3

(a) *Unjustifiable M.D. License Registration Fee:* It was voted to approve the report and recommendation of the Committee that the Council's subject recommendation be approved as submitted and be referred back to the Council for implementation. The recommendation of the Council read as follows:

"That the House of Delegates of CSMS advocate that the Society, the component County Medical Associations and the membership continue legislative efforts to persuade the General Assembly to reduce the presently unjustifiable license registration fee ($150 annually) for Doctors of Medicine to a level commensurate with the costs of administering the license registration bureau."

(b) *Proposed Bylaw Amendments re Judicial Committee:* It was voted to approve the report and recommendation of the Committee that the Council's subject recommendation be approved; i.e., that the Council's statement of intent to amend the Bylaws (re Judicial Committee disciplinary procedures) and the subject report of the Judicial Committee (submitted as information) be placed on the table in lieu of specific proposed amendments to the Bylaws, with the understanding that the Council will have published in the Journal a definitive subject report and recommendation prior to the 1974 semiannual meeting of the House of Delegates so that the proposed amendments may be removed from the table and acted upon at that meeting.

(c) *Bylaw Amendment re Dues (Old Business):* It was voted to approve the report and recommendation of the Committee that the subject amendment be removed from the table (introduced 12/13/73) and adopted. The amendment provides that new members who join the Society during the last half of a fiscal (calendar) year will be assessed one-quarter of the annual dues for that year, instead of one-half as in the past.

(d) *Resolution re Change in CSMS Policy re Physicians' Charges:* It was voted to approve the report and recommendation of the Committee that the subject resolution be referred for study and report to the CSMS Committee on Third Party Payments. In brief, the resolution advocated that CSMS policy be changed from support for "usual, customary and reasonable charges" as the basis for Medicare payments to physicians for their services to one of support for a "uniform payment schedule."

ADDRESS OF THE PRESIDENT

Sidney L. Cramer, Hartford

I am about to complete my allotted term as President of the Connecticut State Medical Society, and, as I said at my inauguration, I am honored to have been granted the privilege of serving in that high office. In the idiom of today, I can say that "I have been there and am on my way back," and that the experience has been a most stimulating and rewarding one for me. In keeping with the current national mood for nostalgia, I have taken stock of some of the matters that have commanded my attention during the past year and propose to share my thoughts on several of these with you today.

As the Society's designated representative on the State Commission on Hospitals and Health Care, I have had my eyes opened to a variety of health care considerations with which, previously, I had had only a passing acquaintance. In addition to reviewing hospital rates, I have had opportunity to inquire into many other aspects of health care which are, perhaps, of equal or even greater direct consequence to physicians.

For example, we have learned that the allocation by the Congress of $350 million or so to foster the development of Health Maintenance Organizations has aroused renewed interest in some segments of our membership in getting into the HMO business, and, conversely, has aroused renewed concern among other segments that these tax-funded agencies may be used to do away with the private practice system.

Now I had always thought, as I think most of us did, that an HMO was a free-standing clinic arrangement—sort of a medical supermarket—which was ultimately to be funded through subscriber prepayment and would compete on more or less of an equal footing for patients and hospital beds (although heavily subsidized by tax dollars) with area physicians who elected to remain outside the HMO fold.

I have learned, however, that the forthcoming HMO-private practice game is not likely to be played on any such upright basis. Three of the four alleged selling points of the HMO concept are: Total prepayment, open enrollment and round-the-clock service. So far so good. But it is the fourth pillar needed to assure an HMO's success that is the most important one and, to me, the most ominous; i.e., the control of hospital beds by ownership or contract.

As a member of the Commission, I can report to you that HMO and pre-HMO activities in Connecticut have moved well beyond the speculative or theoretical level. The Commission has been made aware of a movement among several of our hospitals—four within recent months—to place, plan and undertake construction of office buildings on hospital grounds, with physicians as the prospective tenants. The ingredients common to these projects are: The building and/or the land will be sold or leased to a consortium of physicians or to a developer; physician occupancy will be limited to members of the hospital's staff; tenants may be representative of all medical disciplines with the exception of radiology, pathology and physical medicine—the latter to be provided and controlled by the hospital.

The hospitals concerned represent that these proposed arrangements have appeal because: The patient is offered a medical supermarket where, in one stop, he may buy a complete package of health services; it conserves the patient's time; and it makes the hospital's emergency room and other ancillary services more promptly available to both patients and physicians.

One cannot say that these alleged advantages to all concerned are entirely without merit. But let us examine the other side of this seemingly shiny coin to see if the other side is equally bright. In the first place, a community physician who does not have privileges at the hospital affiliated with the office building is excluded from tenancy. In the second place, it does not require much stretch of the imagination to speculate that tenants of the building will receive favored treatment in one form or another—perhaps be given priority access to reserved beds. And finally, since conversion into an HMO has already been mentioned as a possibility in at least one of these projects, it requires even less stretch of the imagination to foresee that preferential assignment of beds will have to be granted as a concomitant in order to provide that fourth important pillar of HMOs—the control of hospital beds by ownership or contract. An HMO must be able to guarantee that *all* facets of health care will be furnished to subscribers and, hence, the HMO's ability to live up to its guarantee in every particular cannot be left to chance.

As you may have gathered, I have my personal reservations about these kinds of hospital-fostered, everything-under-one-roof facilities. It has always been my belief that, among all qualified and ethical physicians in a community, it is to the benefit of both the physicians *and* the community if a philosophy of live-and-let-live—often called freedom of choice—prevails. The introduction of one or more of these hospital-based HMOs into a community would, I fear, tend to convert that prevailing philosophy among physicians to one of dog-eat-dog. It is not for me to say how well or how poorly patients and physicians will *accept* the HMO concept in general, but I do feel that neither coercion nor exclusion should play any part in determining the degree of such acceptance.

The Commission has also had opportunity to comment on the merits of a number of health planning projects being advanced by a variety of agencies operating in the planning field in Connecticut. Recently, a review was made of several grant requests—totalling six in number and involving more than the 2.2 millions of tax dollars—which have been, or are to be, sent on to HEW for approval. On such requests, the Commission does not sit in final judgment; however, it may pass along to HEW its assessment of the value of a proposal with recommendations, if any. Those of you who have access to the *Hartford Times* may have noted a news report on the meeting at which the aforementioned six grant requests were considered. In the report, a member of the Commission was quoted as saying that he had become somewhat of a "cynic" about health planning in general after observing it for twenty-seven years. He said: "I've been through planning and planning and more planning . . . and we had better give consideration to calling a halt to this sort of thing so that we don't keep plowing the same ground over and over again." You may be interested to learn that the sayer of these personal words of wisdom was your President and that several other members of the Commission expressed wholehearted concurrence.

I report on these particular activities in which I have been engaged because, a year ago, I asked that the Society withhold judgment as to whether the Commission would be a force for good or evil until it had had opportunity to function for a reasonable period. It is now my opinion that, in the main, the Commission is on the right track and that the value of its work will become more and more apparent as time goes on. While I am on this subject, let me again extend an open invitation to all Connecticut physicians to communicate to me their views on any matter within the Commission's jurisdiction. They may rest assured that their views will be brought to the attention of my fellow Commissioners.

As might have been expected, in the balance of this report I feel impelled to speak out once more on a matter which has given me great personal concern both before and during my term as President, and which promises to be of increasing concern to every practitioner of medicine in the months and years that lie ahead. I speak again of the Professional Standards Review Organizations law that was passed by the Congress in late 1972. I realize that a prophet is generally not without honor save in his own country, and that to keep calling for a cautious approach to be taken toward the implementation of PSRO in Connecticut has become somewhat like trying to flag-stop a freight train that has begun to develop downhill momentum. Even so, I repeat what I have said in our Society's councils many times before—that, in my view, a cautious approach to PSRO will prove to be the prudent approach in the long run.

In our private and professional lives, most of us give heed to the ancient warning "Let the buyer beware" when we contemplate the purchase of some new appliance for our homes, some new device to use in our practices or some new drug that appears on the market with a fanfare of extravagant claims for its effectiveness. Yet despite the fact that the American Medical Association strongly opposed the enactment of PSRO on the grounds that its mechanisms for peer review were too structured, too rigid and too regimentive of individual medical judgment; despite the fact that, in our own midst, PSRO is uniformly referred to as a "bad law"; despite the fact that PSRO rules and regulations are changing from week to week and, sometimes, from day to day—despite all these warning signals, our Society's present position is to cooperate and collaborate with the HEW bureaucracy in the implementation of PSRO and—yes—even to "fall back" in capitulation if necessary.

A pundit (whose name escapes me at the moment) has said that the greatest lesson we can learn from a study of history is how little we seem to learn from history. Let us examine his contention in the light of our own experience. Only nine short years ago, the twenty-year debate over nationalized health insurance for the elderly was terminated by the enactment of Medicare. Bowing to the will of the Congress, and in keeping with the law-abiding tenets of our profession, organized medicine at every level did its very best to cooperate fully with HEW in the implementation of the Medicare law and offered extensive in-put with respect to the rules and regulations that would govern the program's administration. Yet it is a matter of record that our initial in-put received rather short shrift from the bureaucrats and that, as the years passed, we were not even asked for our views on any significant aspect of the myriad changes that have been made in Medicare policy from 1966 to date.

We may well inquire of ourselves whether we have learned anything from our Medicare experience. We may well inquire whether, with or without our counsel, Medicare has lived up to expectations. Let me report to you two current examples of non-physician opinion in this regard.

In an article in the February issue of "Private Practice" magazine, Robert J. Myers, former chief actuary for the Society Security Administration, writes: "Medicare was touted as establishing a new era for the aged . . . No longer would they be 'second class citizens' or charity patients from a medical services standpoint" insofar as payment of their doctors' bills was concerned. "The bureaucratic screws, despite these assurances, soon began to tighten . . . At first, the prevailing charges screen . . . was determined with a relatively short lag on the basis of the ninetieth percentile. Then it moved down to the eighty-third percentile and, later, to the seventy-fifth percentile (where it has remained since 1969)." He reports further that the "lag period" for updating charge screens, which began at the level of six months or so, was rapidly lengthened to eighteen months or more and subsequently tied in with wage and price indices—a far cry from the original concept of "usual, customary and reasonable fees." And may I remind you that these departures resulted, in the main, *not* from changes in the Medicare Law itself but from changes in regulations made autonomously by the Secretary of HEW.

"So what?," some may say, "Just so long as the government hasn't gone back on its promises to the elderly." But are the elderly really happy and satisfied with Medicare's performance on *their* behalf? A Massachusetts publication, identified as the "Official Organ of the Legislative Council for Older Americans, Inc.," reports as follows: "We are constantly confronted by hardships and tragedies which are the direct result of unreasonable and counterproductive regulations that are rigid and unchangeable, or of disputes between governmental agencies and jurisdictional vacuums or overlaps which leave the consumer confused and unaided and with no place to turn."

It is not at all my contention that Medicare and Medicaid have been total failures. It is obvious that the expenditure of billions of tax dollars in health care benefits must have done a great many people a great deal of good, both medically and financially, but the track records of both these programs certainly suggest that their application to the entire population through universal national health insurance of similar type would bring disaster to the American health care system and cause widespread dissatisfaction among the American people.

I report these several commentaries on Medicare to you in part because proposals for national health insurance are currently getting so much attention in the halls of Congress and because it appears that almost everyone—including our American Medical Association—is conceding that the enactment of some such program is inevitable within the foreseeable future. But I report them to you more especially for a different reason—which is that practically every major NHI proposal under consideration incorporates a provision for Professional Standards Review Organizations.

As I have said, it has been and is my opinion that a cautious approach to PSRO will prove to be the prudent approach in the long run. As your President, I have accepted the PSRO policies which have been established by majority-supported actions of this House of Delegates and I have made no public statements which could be considered contrary to those policies. This is in the tradition of the office and this is as it should be. Within our own councils, however, I have exercised the right to express disagreement at such times as open debate has been in order and I trust that I have not abused that privilege.

I could perhaps discount my concern that members of our profession and their representative organizations will follow the same primrose path in the implementation of PSRO that was followed in Medicare's implementation if only Connecticut and Connecticut physicians were involved. But we should not shut our eyes to the fact that PSRO is of nationwide concern and that a very large body of medical opinion throughout the United States is substantially or completely at odds with the course our own Society has elected to take. It was evident at Anaheim and it is even more evident now that no single issue has ever before created such divisiveness within the framework of the American Medical Association. One after another, state and county components of the AMA are throwing down the gauntlet in protest against PSRO and demanding that their parent organization take more stringent actions to effect repeal of the law. It is my opinion that this controversial issue will be enjoined definitively at the June meeting of the AMA in Chicago, and that there will emerge from that meeting either a house united or a house divided. I earnestly hope that the former proves to be the case.

It is well enough to say that no organization can hope to represent the views of every last one of its members all of the time, but it alarms me to consider the possibility that, in a period when a single, unified voice is desperately needed to speak for American medicine, our potential strength could be dissipated by the mass defection of members and the fragmentation of the body politic into a disorganized collection of separate and vulnerable smaller units—each committed to "going it alone" and "letting the devil take the hindmost."

It is a bit ironic, I think, that some fifty or so members of the Congress—whose political lives are on the line—are beseeching the AMA to support repeal of PSRO because it is "bad medicine," rather than the other way around. It is cause for concern, I think, to learn that while a number of state medical societies are doing all in their power to make PSRO go away, one or more of their county or district components are applying for tax dollars with which to get a PSRO on the road. And it is particularly disturbing to me—quite apart from organizational considerations—to hear one of my Connecticut colleagues admit recently that he planned to go late to his County Association's annual meeting so that he "wouldn't have to listen to any more about that POS or whatever the hell it's called." If the truth of the matter could be known, I cannot help but speculate as to how reflective this one colleague's attitude may be of the degree of enthusiasm for PSRO's implementation felt by the literally thousands of our members who stayed away from the special county meetings held in early March. I acknowledge that all were duly invited to attend and that the decision not to was theirs alone—but, still, I cannot help but wonder.

Hence, I would plead with you once more to consider the merits of moving with great deliberation—and with the larger, nationwide picture in mind—toward making any final, irreversible commitment to implementing PSRO in Connecticut no matter if the law remains unamended and no matter whether the regulations forthcoming prove to be professionally unacceptable. In any event, I step down from office with malice toward none and with confidence that you will continue to do your best to act in the interests of all concerned, and with my repeated thanks to you all for the privilege and honor of serving as your President.

INAUGURAL ADDRESS OF THE INCOMING PRESIDENT

James H. Root, Jr., Waterbury

Mr. Chairman, Colleagues, Welcome Guests: It is a great honor for me to be standing before you this evening in the capacity of the President of the Connecticut State Medical Society. I thank you very much for the privilege.

Many challenges, perhaps more than ever before, face organized medicine today. We must meet these challenges with active forethought. We must accelerate and keep up to the times lest we succumb to the syndrome of future shock.

Perhaps the most important of these objectives is the high degree of morality that should be inherent in every policy decision we make. Where and when to be somewhat pragmatic is a matter of judgement, but pragmatism should never make us abandon morality. We must remember above all else that we are the people's representatives in the interest of high quality health care. All our policy decisions must be made with this in mind. Nor must we ever lower ourselves to sidestep an issue, political or other, that conflicts with this interest.

It is possible that I might be accused by some of violating this principle when I support the implementation of the Professional Standards Review Organizations (PSRO) law. A purist might say that, since this law regulates physicians and builds up an expensive bureaucracy—which probably will cost more money to administer than it saves through cost-saving mechanisms—we should not participate in its implementation. With this, however, I disagree for four main reasons:

1. Support of peer review is a policy of the Society. Since the PSRO law was passed and since we in Connecticut decided to try to make the law work by implementing it, the peer review movement in our state has accelerated tremendously. This marked acceleration would not have taken place if the law had not been passed.
2. It is conceivable that if physicians do implement the law and are allowed to seize control of it as the law apparently intends they should, it could become a good law, effective peer review throughout the State would be greatly enhanced, and a framework for the future would be built giving physicians control.
3. If we can make PSRO work, physicians may be given more control of forthcoming National Health Insurance programs and other legislation for health than they would be given if they failed to participate in the implementation of PSRO.
4. If we do not participate, someone else will do it anyway, and if this happens, it would be disastrous.

Therefore, I am for implementing PSRO and for seeking constructive amendments to the law to make it more workable for our patients and for ourselves. At the present moment, based on past actions of the House of Delegates and the Council, this represents the stand of the State Medical Society.

If organized medicine is the proper vehicle through which to attain our goals—and it is my basic premise that it is—how do we save the voice and strength of organized medicine? How do we keep our members up to the increasing acceleration of change, transiency and the novelty that is rocking our society today?

First, on a priority basis, we must select what jobs have to be done.

Second, we must do these jobs methodically, thoroughly and well.

Third, we must get enough physicians interested in their own problems to step forward and help us. Five or ten percent of physicians are not enough. We must expand membership at all three levels—County Associations, State Societies and the AMA. Then we must inspire our members to be activists rather than do-nothing negativists who do not think they have time to help. And, very importantly, we must put to work those who do want to help, for if we do not, their interest will soon evaporate.

Fourth, we must seek to represent all physicians no matter what their type of practice or system of delivery is, or whether they are located in an affluent or deprived area.

Fifth, we must defend, work for and support the facility of the office of the private practitioner of medicine. We must give assurance to the doctors in this system that although we defend the right of others to practice differently, we are constructively working for their best interests. This will interest them; this will make them wish to participate.

Also we must keep a very sharp eye on the movement toward unionism. We have not reached the point yet where we desire unionism. Hopefully, we never will. However, if the government and the social revolution continue to move closer and closer to emasculating the medical profession, we may have to unionize not only for our own self-interests but for the interests of protecting the highest quality medical care for the people of the United States.

We must not sit back and wait for problems. We must seek them out and provide leadership for their solutions. The future of the practice of medicine depends upon this.

There are several primary priorities and goals to which we must immediately and continually address ourselves and for which I shall work during the coming year.

The first of these is a statewide peer review agency which will provide an umbrella for Foundations, PSRO and similar and related programs. We must support the establishment of a Medical Institute with central data banks toward this end.

It is anticipated that PSRO soon will be expanded into the private sector. As far as the government is concerned, however, this must not be done in a way which will detract from the care of patients for whose health care the government pays.

It is my hope that we may stay ahead of the game by developing a statewide PRO program before expansion of PSRO is forced upon us.

It is reasonable to expect that a degree of resistance and opposition to any PSRO program will be engendered. Such opposition must be anticipated, and strong organized opposition should not be and cannot be ignored as the AMA found out at its last meeting.

It must be realized also that quality medical care is not synonomous with peer review, medical audit or utilization review. A quality evaluation system must be capable of appraising the outcome of the delivery of health services and then provide for ongoing feedback to improve present care. PRO—and maybe even PSRO—to be truly effective will require expansion from an initial focus on hospital services to a review of medical services provided in physicians' offices, ambulatory care clinics and extended care settings. The question is not whether this is coming but how, when and in what order it is coming. We have to ask ourselves and evaluate what effect blind opposition by hospitals and physicians to a necessary control system will have on our pluralistic care system. The "good old days" when a doctor had time to travel by horse and buggy between patients, and when patients, because of lack of communications via telephone, were willing to wait until they could find the dedicated old gentleman, are pretty much over. Long for their return as we may, they are truly gone. Perhaps because of the volume and density of the population and because of increasing demands for better and quicker communications systems the computer is here to stay.

Such a statewide peer review program under control of physicians could evove from our new Medical Institute, now in the process of being developed. This will be one of my primary interests during the coming year.

The second of our primary objectives has to do with the short term goals of this same Institute. We must finalize the development and operation of a state function as regards PSROs. This has to do with development of a central data collection system with input from and output to each of the four PSROs in the state. It has to do with the development of norms, standards and criteria. It has to do with the common purpose of coordination between these four PSROs.

The third objective is to wind up and successfully finalize the Society's Connecticut Ambulatory Care Study during the next year.

The fourth objective is to complete our survey of Education for Health in Connecticut and work toward the filling in of the gaps in this area. This will include our ongoing efforts to effect legislation which will mandate Education for Health in schools (K-Senior Year High).

The fifth objective is to help the insurance industry develop minimum standards health contracts which will include a large portion of ambulatory care and which can carry the seal of approval of the State Society. This also will be one of my primary concerns during the coming year.

The sixth objective is to draw together and put into operation our program for continuing medical education for Connecticut physicians.

These perhaps are the primary priorities and goals upon which we could concentrate during the year ahead. In my swan song speech next Spring, I would like to be able to give a glowing report of our progress in all six of these areas.

However, there are other—perhaps secondary—goals which cannot be ignored:

1. We should reevaluate our legislative efforts, for, ladies and gentlemen, it can be truly said that in Congress and in HEW we are about to take an awful beating unless we do something fast.
2. We should breathe new life into COMPAC.
3. We should further delineate the responsibilities and activities of the Judicial Committee. Should it merely function as an appellate body? Or should it handle and seek out ethical problems as well?
4. We should breathe new life into Public Relations (internal and external).
5. We should think about whether or not the organizational structure of the Society should be even further updated. In other words, should we give thought to actively drawing our maze of committees into more functional divisions than we had before, with executive committees acting to prevent overlapping interests from wasting our time?
6. We should help the Editor of the Journal to continue to upgrade this publication. We have little time for infighting among ourselves when our unanimous voice is needed to handle external and common challenges. It is my view that the Editor should run the Journal—and that's all there is to it.
7. We should improve our liaison with the AMA and our County organizations. We should put more constructive input into both of these areas.
8. We should improve our liaison and cooperation with the specialty sections so that they would feel more an integral part of the Society.
9. The same goes for the Medical Staffs of Hospitals, with whom we have had but little liaison in the past.
10. We should improve our liaison and cooperation with third party payors and the Connecticut Hospital Association. We have been working on this for the past several years.
11. The same can be said for our liaison with lay health planners.
12. We should attack the almost impossible task of creating effective liaison with Government, both state and national.

In order to develop these goals we need dynamic leadership and member manpower. Without both of these it is unlikely that we will make out very well. But I have faith in both the House and the Council, and I have faith in the grass roots, so we should do all right.

Thank you very much.

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Physicians wishing to locate in Connecticut are invited to submit a resume to be kept on file with the Physician Placement Service. Candidates are requested to inform the Society when they are no longer available for consideration for opportunities which might be available in Connecticut.

Journal announcements under "Placement Wanted" or "Placement Opportunities" will now be processed as classified advertisements. Anyone wishing to place such an announcement must submit copy by the first of the month, two months before the month of issue.

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Associate Executive Director

Leonard R. Tomat
Assistant Executive Director
Scientific Activities

Summary of Proceedings

Council Meeting

Wednesday, May 15, 1974

I. Attendance

Present were: Drs. Root, Jr., VanSyckle, Spitz, Johnson, Brandon, Grendon, Fabro, Bradley, Hess, Cramer, Granoff, Hecklau, Ragland, Jr., James, Freedman, Roch, Kamens, Rubinow, Harkins, Mendillo, Eslami and Barrett.

Also present were: Mrs. Lindquist, Mr. Sweeney, Mr. Tomat and Dr. Richards.

Absent were: Drs. Backhus, Nolan, Gardner, Canzonetti, Krinsky, Dambeck, McGarry, Magram, Hastings and Klare.

Organization

Following introduction of new CSMS officers and County Association Councilors, President Root spoke briefly concerning his views on some of the objectives the achievement of which should be sought by the Society in the coming year. It was VOTED to accept Dr. Root's remarks for filing and to distribute them in published form with the agenda for the next Council meeting.

There being only one nominee each for the posts of Chairman and Vice Chairman of the Council for 1974-75, it was VOTED to close the nominations and to elect David A. Grendon, Sharon, Chairman and Carl W. Johnson, Thompsonville, Vice Chairman.

Business Meeting

II. Routine Business

Approval of Minutes

As published and distributed, it was VOTED to approve the minutes of the meeting of April 18, 1974.

Life Memberships

It was VOTED to approve applications for Life Membership received from the following eligible Active Members:

David F. Conway, Jr., 1427 Chapel Street, New Havan (NH)—1/1/74.

Jachin B. Davis, P.O. Box 187, Whitestone, Virginia (NH)—1/1/75.

Charles H. Hodgkins, Jr., 85 Trumbull Street, New Haven (NH)—1/1/75.

Hugh K. Miller, 70 Mill River Street, Stamford (F)—1/1/75.

Louis A. Parrella, 25 Trumbull Place, North Haven (NH)—1/1/75.

John L. Pool, 24 Stevens Street, Norwalk (F)—1/1/75.

Joseph Riccio, Blueberry Knoll, Middlebury (NH)—1/1/74.

Beckett Howorth, 49 Lake Avenue, Greenwich (F)—1/1/74.

Election of Student Members

It was VOTED to elect to Student Membership 15 medical students enrolled in U.S. schools and/or interns or residents in Connecticut hospitals. The names of those elected will be published in an early issue of the Journal.

Date of Next Meeting.

The next meeting of the Council was scheduled for Thursday, June 6, 1974.

III. Old, New and Special Business

Appointment of Council Subcommittees, Etc.

It was VOTED to appoint the members of the various Council subcommittees for 1974-75.

In reviewing the membership of the Ad Hoc Committee on Acupuncture (appointed 10/11/73), it was noted that the Committee had made no report since its appointment. It was therefore VOTED to request the Committee to file a progress report on its studies thus far in time for consideration by the Council at its next meeting (6/6/74).

Matters Referred by House of Delegates for Council Implementation

(a) *Unjustifiable M.D. License Registration Fee:* The House of Delegates having voted that "the Society, the component County Medical Associations and the membership continue legislative efforts to persuade the General Assembly to reduce the present unjustifiable registration fee ($150 annually) for Doctors of Medicine to a level commensurate with the costs of administering the license registration bureau," the Council VOTED to apprise the component Associations of the action of the House, urge them to initiate programs in support of its purpose and inform them as well as the membership of the Council's intention to actively pursue the matter at state level.

It was further VOTED to accept as information the results of a Staff polling of other professional organizations regarding their attitudes toward seeking reductions in their increased registration fees. In brief, all agencies contacted expressed organizational and membership disapproval of the marked increases but none indicated that they have plans at present to seek reductions.

(b) *Bylaw Amendments re Judicial Committee:* Having made a commitment to prepare and submit to the House of Delegates for action at the 1974 semi-annual meeting a definitive report on proposed amendments to the Bylaws re disciplinary procedures to be followed by the Judicial Committee in hearing appeals, the Council VOTED to refer the subject report submitted by the Judicial Committee (4/18/74) to the Subcommittee to Study and Revise the Bylaws for study and report by 9/1/74. It was further VOTED to direct the Subcommittee to hold hearings at which those wishing to speak on the Bylaw proposals may appear and be heard, and to send a copy of the Judicial Committee's report to each of the component County Associations with a request that all comments on same be submitted to the Subcommittee by 7/31/74.

Nominations for AMA Councils and Committees

Nominations for councils and committees appointed by the AMA Board of Trustees were made as follows: Council on Environmental, Occupational and Public Health—Norman H. Gardner, East Hampton; Council on Scientific Assembly—William F. Eckhardt, Jr., New Canaan.

Reports re CMI—Committee on Peer Review Systems

It was VOTED to accept for filing two documents submitted by the Committee. The first of these was the draft of proposed bylaws for the Connecticut Medical Institute, Inc. with an attached list of minor amendments suggested by the Committee chairman, James D. Kenney, New Haven. The second was the draft of a proposed contract to be consumated by CSMS and American Health Systems, Inc., covering the services to be rendered by AHS and the method of payment by CSMS for such services. Relating to the latter document was a bill for services rendered by AHS (as of 5/3/74) in the amount of $14,327.56.

Concerning the proposed CMI bylaws, it was VOTED to approve the minor changes suggested by Dr. Kenney.

Concerning the proposed CSMS-AHS contract, no action to approve could be taken by the Council because it was determined that a quorum of Council members (17) were no longer in attendance. However, it was the consensus of the members still present that payment of the AHS bill for services rendered could be paid without Council approval. The contract will be resubmitted for approval at the next meeting (6/6/74).

Report—Advisory Subcommittee on Publications

It was VOTED to accept a report of the Advisory Subcommittee for filing, and to approve a recommendation of the Subcommittee as follows: That the format of free Physicians' Placement Service announcements ("wanted" and "opportunities") in the Journal be resumed as soon as feasible, that each such announcement be published twice without charge, and that up to two pages in each issue of the Journal be allocated to Placement Service announcements. The Editor informed the Council that the two pages for such announcements would be added, rather than subtracted from the present 64-page Journal format.

Communication—Eugene L. Quinto, Hartford

It was VOTED to accept for filing a letter received from Dr. Quinto in which he requests that amendments to the Bylaws be developed which would preclude "last minute" (except for emergency) resolutions, reports, etc., being presented to members of the House of Delegates on the day of a meeting of the House, and that, prior to the adoption of such amendments, some sort of "discouragement" policy be developed and imposed which would accomplish a similar purpose. It was VOTED to refer Dr. Quinto's letter to the Subcommittee to Study and Revise the Bylaws for study and report.

Promotion of Candidacy—CSMS Nominee for AMA Council on Medical Service

Having been apprised that the AMA Board of Trustees will submit to the House of Delegates, as a candidate for election to the Council on Medical Service, the name of James H. Root, Jr., Waterbury, it was VOTED to appropriate up to $300 to be used to promote Dr. Root's candidacy in advance of, and at, the June meeting of the AMA House of Delegates.

Council Opinion re Specialty Society Representation in AMA H. of D.

It was VOTED to accept for filing a Staff report on information provided by AMA relating to a proposal now under consideration which would give direct voting representation (Delegates and Alternates) in the AMA House of Delegates to "national specialty societies." It was then VOTED to remove from the table, discuss and adopt a motion as follows: That the Council of the Connecticut State Medical Society express disapproval of the proposal to grant direct representation in the AMA House of Delegates to national specialty societies. Notice of the Council's action will be made to the AMA Council on Constitution and Bylaws (which has the proposal under study) and, as information, to the members of the Connecticut delegation to AMA.

N.B.: *The foregoing is a summary of the proceedings and actions of the Council on May 15, 1974. Detailed minutes of the meeting are on file at 160 St. Ronan Street, New Haven, for perusal by any interested member of the Society.*

STUDENT MEMBERS

Fifteen student members were elected to the Society:

Lawrence J. Biris, 1 South St., No. 719, New Haven
Yale University—Class of 1977
Pre-Med: Columbia University
Parent: Daniel Biris

Bruce R. Boynton, 5725 Pine Acres La., Roanoke, Virginia
Yale University—Class of 1977
Pre-Med: University of Chicago
Parent: Douglas R. Boynton

Richard D. Bucholz, 578 Winthrop Ave., New Haven
Yale Medical School—Class of 1977
Pre-Med: Yale College
Parent: Donald J. Bucholz

Carol J. Cohen, 822 Lake Ave., Bristol
University of Connecticut—Class of 1974
Intern: St. Francis Hospital—7/1/74
Parent: J. J. Cohen

Paul M. Copeland, 83-55 Woodhaven Blvd., Woodhaven, N.Y.
Yale University—Class of 1978
Pre-Med: Yale College
Parent: Nathaniel Copeland

Lawrence B. Eisenberg, M.D., 30 Wood St., Hamden
Albany Medical College—Class of 1968
Resident: Yale-New Haven Hospital
Parent: Hyman J. Eisenberg

Todd W. Estroff, 211 E. Main St., Lakeland, Florida
Yale Medical School—Class of 1976
Pre-Med: Michigan State
Parent: Selig H. Estroff

John D. Hunt, 20 Long Lots Rd., Westport
University of Connecticut—Class of 1977
Pre-Med: University of Pennsylvania
Parent: Deceased

Barry A. Kassel, 78A Downey Dr., Manchester
SUNY at Buffalo—Class of 1973
Intern: Hartford Hospital
Parent: Nathan Kassel

Plaridel S. Tee King, Waterbury Hospital, Waterbury
University of Sto. Somas—Class of 1960
Resident: Yale-New Haven Hospital
Parent: Joaquin Tee King

Norman V. Kohn, 1 South St., New Haven
Yale School of Medicine—Class of 1976
Pre-Med: Massachusetts Institute of Technology
Parent: Howard M. Kohn

Robert J. Mitchell, 1 South St., No. 308, New Haven
Yale School of Medicine—Class of 1977
Pre-Med: Harvard University
Parent: James H. Mitchell

Ricky M. Schneider, 8 Gainsville Dr., Plainview, N.Y.
Yale Medical School—Class of 1977
Pre-Med: Yale College
Parent: Ira Schneider

Steven L. Warsof, 1 South St., New Haven
Yale School of Medicine—Class of 1977
Pre-Med: Massachusetts Institute of Technology
Parent: Jack Warsof

John C. Wiles, 30 Colony Rd., East Lyme
Yale School of Medicine—Class of 1976
Pre-Med: Yale College
Parent: Rev. Gordon P. Wiles

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Mrs. Malcolm Edgar, New London

Corresponding Secretary
Mrs. Raymond Bopp, Windham

Treasurer
Mrs. Marvin Levenstein, New Haven

Auxiliary President's Annual Address to CSMS House of Delegates

The first thing I want to say is thank you. Thank you for inviting me here and for your approval of my major request last year, the Unified Credit Plan, which resulted in a $13,582 combined contribution to the AMA Education and Research Fund. The Connecticut State Medical Society contributed $8,282 and our super saleslady, Mrs. Norman Barker, raised $5,300.

Mrs. William Lenkowski, our International Health Chairman, has supervised an active year of baby showers for Navajo Indian babies treated at the Bisti Clinic in Farmington, New Mexico. Dr. and Mrs. Lenkowski visited the clinic in May to see how our funds and layettes were being used. Shipping charges for this project are paid by commissions received from our package vacation trips.

Mrs. George Roch, our president-elect, accomplished a first for our Auxiliary by being chairman of a state conference sponsored by 48 organizations including CSMS and our Auxiliary. On April 27 at the University of Connecticut Health Center the Quality of Life for Connecticut Children Conference attracted over 400 citizens who discussed, in 18 workshops, rights and responsibilities in the fields of economics, education, health, justice, business and religion. The AMA contributed the expenses of the keynote speaker, Dr. Effie O. Ellis, special assistant to its executive vice president and an architect of the National Quality of Life Congress.

I am proud of the Medical Self-Help Training Program which the Hartford County Auxiliary conducted as a 16-hour course to provide laymen with a common sense approach to emergency situations involving individuals, family or community. Mrs. Jerry Crawford, originator of the program in Hartford, has compiled a comprehensive packet of instructions for others interested in teaching the course. Northwest Catholic High School in West Hartford will use it as a credit course and other schools are planning to incorporate it into their curriculum. This program will be presented at the Auxiliary's National Convention as Connecticut's contribution to the State Auxiliaries' Idea Exchange.

The Auxiliary has been active also in legislation, health careers and education, scholarship, volunteer activities, such as eye-screening and bloodmobile, and in revising our Constitution and By-Laws to conform with those of the National Auxiliary. A synopsis of our year's activities are among the displays here at the hotel today.

We celebrated our 30th anniversary at our annual meeting on April 30th with a luncheon at the Tumblebrook Country Club. (Extras, such as an expanded guest list, were supplied by revenue from our package vacation trips!) All the state past presidents were invited to attend. In 30 years we have expanded our programs and grown into a valuable and worthwhile organization. We are not just "Ladies Bountiful" but we are your wives trying to help you in health-related fields and in community service.

We still need members. Although we have new ones our figures are down about 40 members this year. We will miss Mrs. Dewey Katz, a charter member who has been devoted and active on the State Executive Board for 30 years. Dr. and Mrs. Katz are moving to California. Auxiliary sponsored vacation trips have provided new members and friends in pleasant surroundings. Membership "coffees" have helped. But now I come to my major request for this year. Will you please go home and check out your wife's status in the Auxiliary? We really need her!

Roberta B. Czarsty

In Memoriam

Ingenito, Gabriel A., University of Maryland, 1943. Dr. Ingenito was a practicing obstetrician and gynecologist in the New Haven area for the past 25 years. During World War II, he served as a captain in the U.S. Army Medical Corps. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Ingenito died April 26, 1974, at the age of 57.

Martineau, Roland, Yale Medical School, 1958. Dr. Martineau was a practicing radiologist in the New Haven area since 1964. He was a member of the New Haven County Medical Association and the Connecticut State Medical Society. Dr. Martineau drowned while scuba diving near Jamestown, Rhode Island, April 29, 1974. He was 42 years old.

Mendillo, Anthony J., Yale Medical School, 1907. Dr. Mendillo was a practicing surgeon in the New Haven area until his retirement in 1971. He earned a distinguished reputation as a surgeon by pioneering in new surgical procedures, particularly with the more efficient use of anesthesia for certain operations. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Mendillo died May 10, 1974, at the age of 88.

O'Brien, John F., Yale Medical School, 1908. Dr. O'Brien was a practicing orthopedist in the New London area until his retirement in 1950. He was appointed superintendent of the Seaside Sanitarium in Waterford and remained there until his retirement. He was a member of the New London County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. O'Brien died April 10, 1974, at the age of 90.

Sheiman, Milton, University of Michigan, 1939. Dr. Sheiman was a general practitioner in the Fairfield area since 1945. He was a member of the Fairfield County Medical Association and the Connecticut State Medical Society. Dr. Sheiman died April 1, 1974, at the age of 59.

Skorneck, Alan, University of Minnesota, 1943. Dr. Skorneck was a practicing radiologist in the New Haven area since 1945 to 1959, when he moved to California. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Skorneck died April 28, 1974, at the age of 57.

Stringfield, Oliver L., New York University, 1916. Dr. Stringfield was a practicing pediatrician in the Fairfield area since 1919. He served in the U.S. Army in both world wars. He was in the medical corps from 1917 to 1919, reaching the rank of captain. During World War II, he served in the U.S. Army teaching program. He had served as a president of the Stamford Medical Society and the Fairfield County Medical Association. He was a member of the Fairfield County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Stringfield died May 1, 1974, at the age of 82.

The Relationship of the Physician to Media of Public Information

Many people, literate and well educated, do not possess a special knowledge of medicine. Medical books and journals are not always easily accessible or readily understandable.

The medical profession considers it ethical for a physician to meet the request of a component or constituent medical society to write, act or speak for general readers or audiences. On the other hand, it may often happen that the representatives of popular news media are the first to perceive the adaptability of medical material for presentation to the public. In such a situation the physician may be asked to release to the public some information, exhibit, drawing or photograph. Refusal to release this material may be considered a refusal to perform a public service, yet compliance may bring the charge of self-seeking or solicitation.

An ethical physician may provide appropriate information regarding important medical and public health matters which have been discussed during open medical meetings or in technical papers which have been published and he may reveal information regarding a patient's physical condition if the patient gives his permission, but he should seek the guidance of appropriate officials and designated spokesmen of component or constituent medical societies. Spokesmen should be empowered to give prompt and authoritative replies and a list should be issued which identifies them and discloses the manner in which they may be reached. These provisions are made with full knowledge that the primary responsibility of the physician is the welfare of his patient but proper observation of these ethical provisions by the physician concerned should protect him from any charge of self-aggrandizement.

Scientific articles written concerning hospitals, clinics or laboratories which portray clinical facts and technics and which display appropriate illustrations may well have the commendable effect of inspiring public confidence in the procedure described. Articles should be prepared authoritatively and should utilize information supplied by the physician or physicians in charge with the sanction of appropriate associates.

When any sort of medical information is released to the public, the promise of radical cures or the boasting of cures, or of extraordinary skill or success is unethical.—*Opinions and Reports, Judicial Council of the A.M.A.*

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Connecticut Medicine

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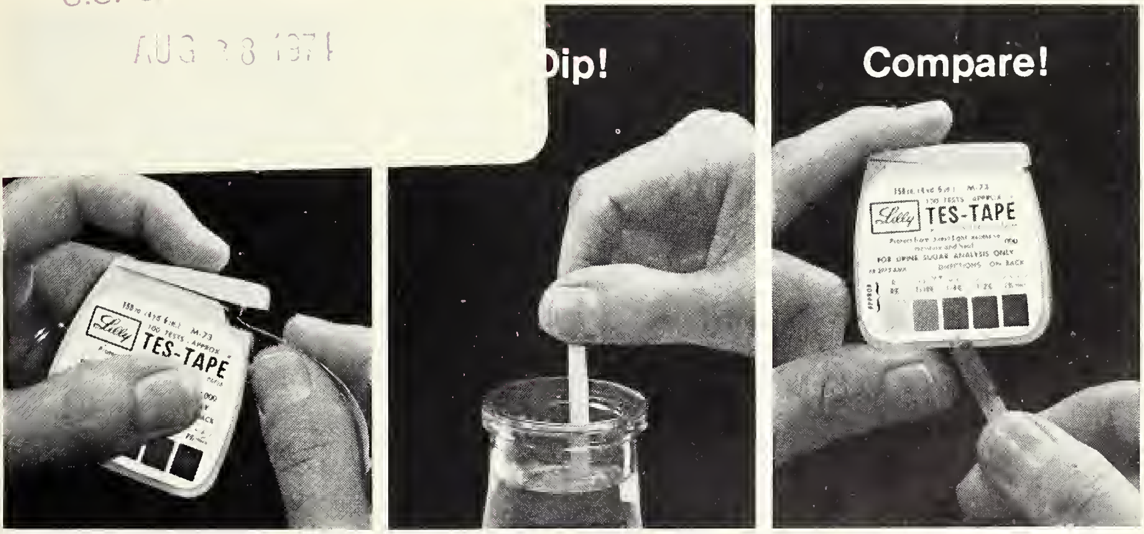

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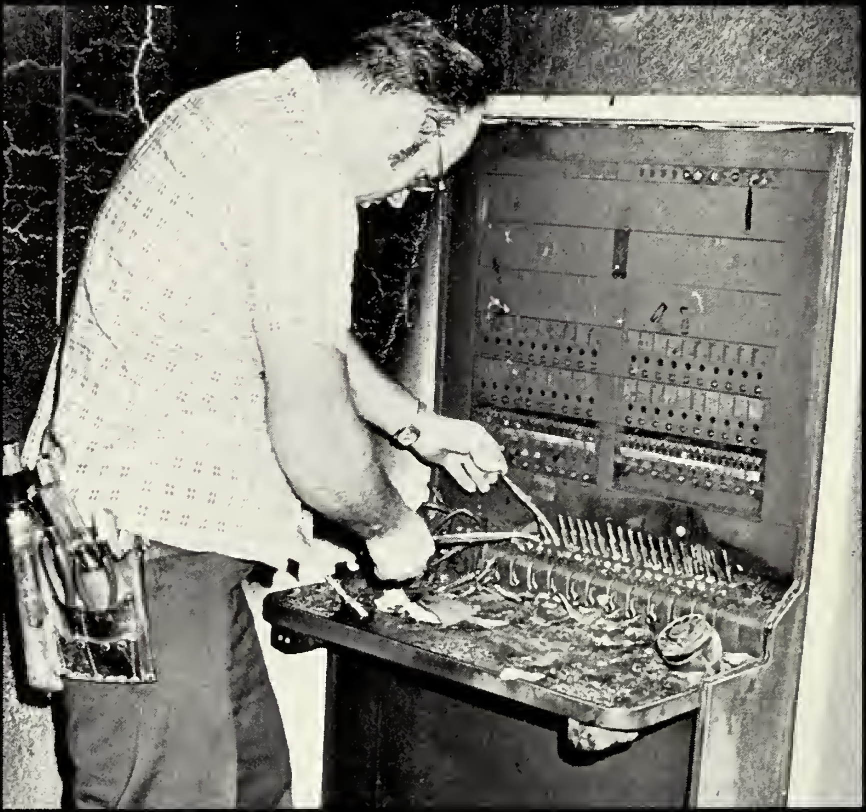

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Management of Melanoma at Hartford Hospital, 1931-1965

N. William Wawro, M.D., Chester Humphrey, M.D. and Lester Adelson, M.D.

ABSTRACT—240 patients with melanoma were treated at the Hartford Hospital between 1931 and 1965 yielding a five year survival rate of 46%.

Differential survival rates were related to the histopathological classification of the primary lesion, its size, presence or absence of regional lymph node metastases and the anatomical location of the primary tumor.

The unusual biological behavior of this pigmented skin cancer was noted.

The shortcomings of any retrospective long period review, i.e. variables of histopathological interpretations and multiple surgeon philosophies of treatment are acknowledged, and may be responsible for the modest survival rates in this experience.

Introduction

Melanoma has sustained the interest of physicians over the decades principally because of its bizarre and unpredictable behavior; witness its innocuous behavior in pre-pubertal adolescence, its delayed and explosive recurrence after a long free interval, the trans-placental passage of melanoma cells from mother to fetus, metastatic lymphatic spread without apparent primary and a substantial number of proven spontaneous remissions.[1]

Despite this constellation of biological variants, data from cancer registries indicate continuing and sustained improvement in five and ten year survival statistics. Figures 1 and 2 indicate such progressive improvement, derived from the Connecticut State Cancer Registry for the years 1935-1965. Such improvement suggests that public and professional education programs are increasingly successful in promoting earlier diagnosis and more adequate surgical therapy.

Concomitant with more aggressive management for melanoma, in recent years there has been a careful correlation between the clinical-pathological varieties of this pigmented skin neoplasm and prognosis. With the demonstration that primary cutaneous melanoma can be classified into three distinct groups, related survival statistics suggest that prognosis may be a function of the horizontal and more favorable spread, in contrast with the vertical and more invasive, unfavorable course.[2] [3] In ascending order of malignancy are the lentigo-maligna melanoma (Hutchinson's melanotic freckle), superficial spreading melanoma and nodular melanoma.

Furthermore, recent immunological studies[4] in human melanomas lend biological credence and some understanding for its unusual and varied natural history. Anti-tumor antibodies have been isolated and related quantitatively to the tumor specific antigens in melanoma patients. The progression of human melanoma has been correlated with the patient's immune response, thus giving hope that immunotherapy may plan an adjunctive role to definitive surgery.

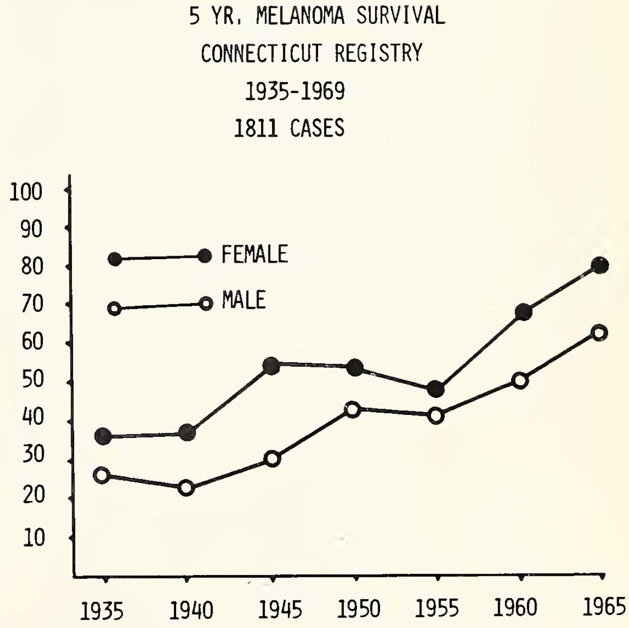

Figure 1

Material

240 patients with confirmed histopathologic melanoma of the skin and treated at the Hartford Hospital between 1931-1965 were the subjects for this study. Excluded were the juvenile melanomas and ocular pigmented melanomas. During this 34-year period, there was no uniformity of treatment

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DR. N. WILLIAM WAWRO and DR. CHESTER HUMPHREY, Department of Surgery, Pathology, Hartford Hospital, Hartford, Conn. DR. LESTER ADELSON, Case Western Reserve Medical School, Cleveland, Ohio.

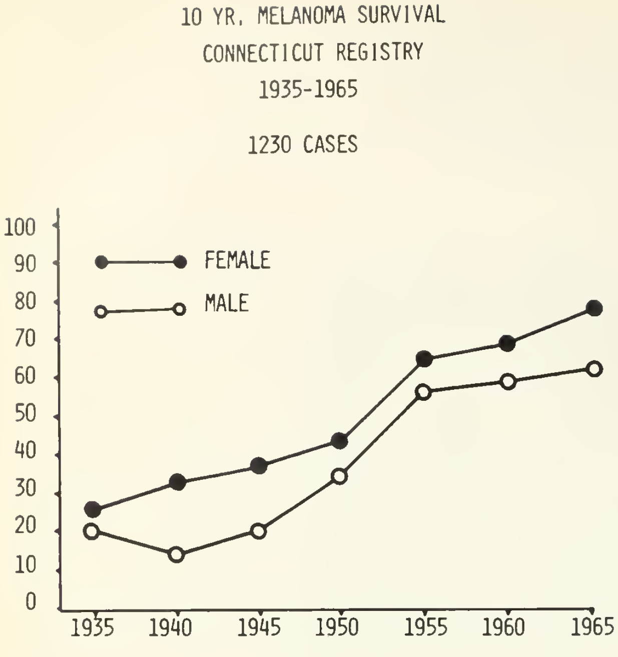

Figure 2

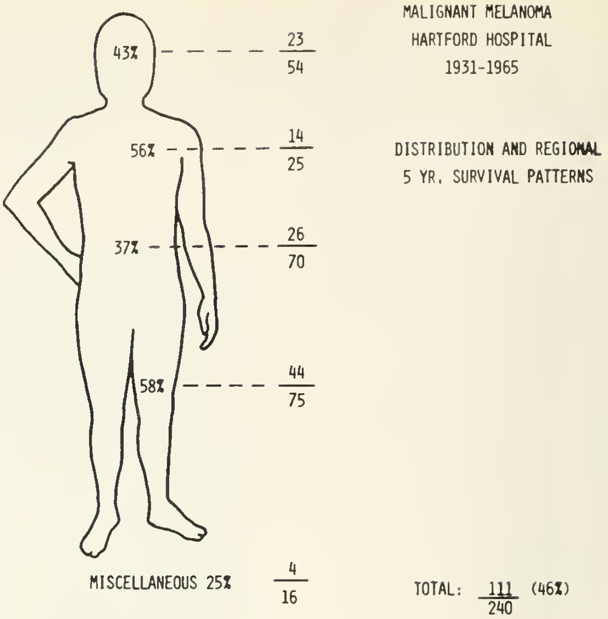

Figure 3

and only recently have these pigmented lesions been classified into the three categories described by Clark and McGovern, i.e., malignant freckle of Hutchinson, superficial spreading melanoma and nodular melanoma. There were 127 women and 113 men in this series. Figure 3 illustrates the regional distribution and relative five year survival patterns. In our group the incidence is greatest in the lower limb, then trunk, head and neck and upper extremity. The better five year survival statistics were observed in the lower and upper extremities followed by head and neck and trunk zones. The majority of melanomas occurred in patients between 30 and 70 years of age.

It was difficult to relate survival to the size of the primary lesion, since accurate measurements of the primary tumor were infrequently documented. However, using 2 cm. as an arbitrary indicator in those patients where measurements were available, it is noted in Figure 4 that tumors less than 2 cm. had a more favorable prognosis than did the larger lesions.

Treatment

In the early years of this survey, melanoma was treated by simple excision with or without regional lymph node biopsy. In the later years, a more aggressive surgical approach was directed at both the primary site and the regional nodes. However, since a great number of surgeons with varying concepts of treatment were responsible for the management of these patients, through these three decades under study no uniformity of treatment was observed, nor was a prospective study protocol followed.

In an effort to observe trends in therapy, we have arbitrarily divided the patients into three time groups: 1931-1947, representing the earliest years when more conservative approach was followed; 1948-1959, as an intermediate time span when it was recognized that a more aggressive surgical approach was necessary; and 1960-1965 when a more aggressive approach for both the primary site and regional lymph nodes was generally accepted.

MALIGNANT MELANOMA
HARTFORD HOSPITAL
1931-1965

SIZE	5 YR. SURVIVAL
LESS THAN 2CM.	60%
GREATER THAN 2CM.	32%
UNKNOWN	30%

Figure 4

Results

Figure 5 demonstrates the sequential improvement in the five year survival rates for melanoma in these three periods, improving from a 35% five year salvage for the early period, to a 60% five year survival in the last decade when more extended treatment was generally accepted.

When the size and character of the regional lymph nodes were noted and/or histologically confirmed, the ominous implications and prognosis of regional

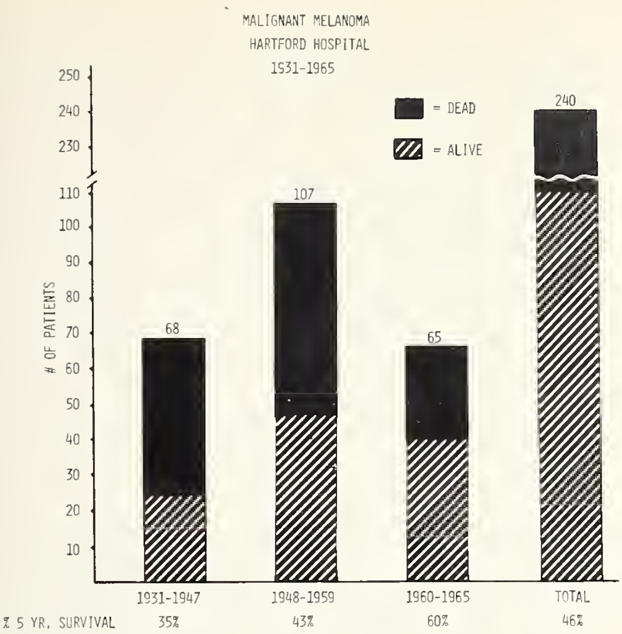

Figure 5

MALIGNANT MELANOMA
HARTFORD HOSPITAL
1931-1965

RELATIONSHIP OF 5 YR. SURVIVAL TO PATHOLOGICAL STAGING

	# PATIENTS	0 NODES	+ NODES
1931-1947	68	24 (35%)	0 (0%)
1947-1959	107	34 (31%)	12 (11%)
1959-1965	65	35 (59%)	7 (10%)
1931-1965	240	93 (40%)	19 (8%)

Figure 6

lymphatic metastases is recorded in Figure 6. Thus, while those patients without lymph node involvement or distant spread (Stage I) showed improvement in survival with more radical surgery to the primary site, our figures for melanoma associated with proven regional lymph node metastases is discouraging. A 40% five year survival in those patients without regional lymph node metastases is noted in contrast with the 8% five year control when metastases to regional lymph nodes were demonstrated.

Despite this fact, attention should be directed at the small but constant group of patients who demonstrate metastatic melanoma to one or more regional lymph node areas without pre-existing or visible primary skin site. Such metastatic melanoma of unknown primary origin has an incidence of 3-8% in several large series,[5] [6] Figure 7. Furthermore, in our series the five year survival rate following radical lymphadenectomy for this group paradoxically appears to be better, when compared with those patients in a similar Stage II disease associated with a known primary source. We note three of seven patients in this category who are 21, 10 and 7 year survivors following radical lymphadenectomy for proven metastatic melanoma to lymph nodes associated with an unknown primary.

INCIDENCE OF METASTATIC LYMPHATIC
MELANOMA OF UNKNOWN PRIMARY ORIGIN

PACK, 1961	29 (1190)	2.4%	
DASGUPTA, 1963	37 (992)	3.7%	(10 5 YR.+)
STEHLIN, 1964	40 (461)	8.7%	
WAWRO, 1973	7 (240)	3.0%	

Figure 7

As noted above, in recent years, it has been demonstrated that primary cutaneous melanoma can be classified into three clinical pathological groups described as lentigo-maligna, superficial spreading melanoma and nodular melanoma, each with a rather typical history of development, distinctive clinical appearance, characteristic microscopic findings and the associated prognosis.[7] Prognosis appears to be related to the depth of dermal invasion, with the first two lesions demonstrating a more horizontal spread and less tendency to vertical invasion, thus resulting in a more favorable outlook. The nodular melanoma demonstrates a vertical invasive tendency through various dermal levels and into the subjacent fat and thus has a more unfavorable prognosis.

MALIGNANT MELANOMA
HARTFORD HOSPITAL
1931-1965

RELATIVE SURVIVAL PATTERNS OF "CLASSIFIED" MELANOMA

TYPE	# PATIENTS	5 YR SURVIVAL
LENTIGO MALIGNA	4	3 (75%)
SUPERFICIAL SPREADING	32	24 (75%)
NODULAR MELANOMA	17	7 (40%)

Figure 8

When 53 melanomas in our group of 240 were thus evaluated by Dr. Beckett of the Department of Pathology, concurrence with this observation was noted. In Fig. 8 a more favorable outlook is enjoyed by those two lesions which have a characteristic horizontal superficial and minimal invasive spread, in contrast to the more vertically invasive nodular melanoma.

Discussion

It is apparent from our data and that of others, that the diagnosis of melanoma is not synonymous with death. A clear understanding of its varied clinical appearance and bizarre biological behavior should help the physician to assess the gravity of the specific case and to recommend a course of treatment.

With the more favorable superficial melanomas, without regional lymph node involvement, adequate surgical treatment can result in 75-80% five year survival. The invasive nodular melanoma with associated lymph node metastases has a more gloomy prognosis despite radical surgical treatment.[8 9]

There is little doubt that in the current state of our knowledge, surgical resection offers the best opportunity for control of this neoplasm. It is increasingly recognized that radical excision of the primary site (with or without skin grafting), in-continuity with regional lymphatics, if clinically enlarged, is the treatment of choice. If the primary site is in an anatomical location which does not lend itself to an in-continuity dissection, but the regional lymph nodes are enlarged, then simultaneous discontinuous radical lymphadenectomy is indicated.[10 11]

There has been considerable debate whether lymph node dissection, in-continuity or discontinuity, should be recommended for patients with melanoma of the skin who do not have enlarged regional lymph nodes. Support for routine lymph node dissection under these circumstances is found in the improved five year survival statistics of those patients so treated.[11-15]

Exception to this plan might be made for a small 1 cm. cutaneous melanoma classified as a superficial spreading melanoma or a lentigo-maligna variety without underlying dermal invasion and without palpable enlarged regional nodes. Similarly, midline trunk melanomata without clearly enlarged regional lymph nodes should be treated aggressively locally, while the regional lymph node areas are observed at periodic followup. The presence of distant metastases, serious intercurrent disease or the extremely aged patient would contraindicate aggressive local and regional management.

However, it should be stressed that the infrequent patient with proven metastatic melanoma in a single lymph node area without a known primary or distant hematogenous spread should not be denied radical lymphadenectomy, and chance for survival.

Neither radiation therapy nor chemotherapy have a place in the primary management of this disease. Some transient and brief palliation may be achieved with either or both these modalities combined, but the associated morbidity may be high. The current favorite chemotherapeutic agent for use in disseminated malignant melanoma is Dimethyl-triazeno-imidazole-carboxamide. Those series using this agent singly or in combination demonstrated a 20% brief remission rate associated with varying morbidity.[16]

Additionally, immunotherapy on an experimental clinical trial has been described utilizing non-specific antigens such as BCG as well as specific tumor antibodies. These results are somewhat encouraging in suggesting that another systemic approach to this problem may be available in the future.[4]

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Trophoblastic Disease Diagnosis and Management

Ernest I. Kohorn, M.D.

Recent developments in management have made possible a great reduction in the morbidity and mortality of molar pregnancy and choriocarcinoma.[1 2] The rarity of the condition prevents any single physician from gaining extensive experience and several reports suggest that such cases are better managed by an experienced team knowledgeable in the use of the most modern techniques[3] (Table 1). The advent of ultrasound scanning has made possible the early diagnosis of molar pregnancy.[4 5] New methods of radioimmunoassay have made possible the precise measurement of human chorionic gonadotrophin, allowing exact monitoring of the patient at risk.[6 7] Developments in chemotherapy have allowed the conversion of a mortality of 90% in advanced disease to a nearly equal survival.[1 8 9 10] This survival is associated with the retention of reproductive capacity.[11] It is the purpose of this paper to review current concepts of trophoblastic disease.

Nomenclature

Trophoblastic disease is the term applied to the condition previously named choriocarcinoma, chorioadenoma destruens and metastasizing mole. Primary choriocarcinoma of the ovary or testis is called nongestational trophoblastic disease. Gestational trophoblastic disease is preceded by hydatidiform mole, previous abortion (frequently with hydatidiform degeneration) or previous apparently normal pregnancy. It is called nonmetastatic if the lesion is confined to the pelvis (Fig. 1) and is metastatic trophoblastic disease when there is evidence of metastasis to lung, brain, liver, vagina, or other extrapelvic sites. This terminology avoids the difficulty of a histopathologic diagnosis and provides a good basis for management.

Histologic Evaluation

There is still controversy about the relation of the histology of the mole to clinical outcome. Hertig and Sheldon[12] advocated the classification of mole into 6 grades ranging from no trophoblastic proliferation through moderate trophoblastic proliferation to frank choriocarcinoma in which by definition no villi are present. Goldstein[13] found that Grade 1 and 2 moles were never associated with significant trophoblastic disease while the more cellular moles led to gestational trophoblastic disease in some 30 per cent cases. Bagshaw,[14] in a retrospective study of patients who developed trophoblastic disease requiring treatment, found that moles with little trophoblastic proliferation precede trophoblastic disease as frequently as more cellular moles. Some of the tissue examined, however, was purely molar and not curettage material. The problem of histologic evaluation is unresolved. Histology may be used as a prognostic guide but therapy should be based on measurement of human chorionic gonadotrophin (HCG) titres.

Diagnosis of Hydatidiform Mole and Abnormalities of Early Pregnancy

The busy obstetrician is frequently faced with the problem of the differential diagnosis of bleeding during the first trimester of pregnancy. Recently developed ultrasound techniques can usually provide a speedy answer.[15] The simplest method is the detection of fetal heart echoes by means of a Doppler technique. By means of apparatus now generally available it is usually possible to obtain a clear heart rate by the 10th week of gestation if a full bladder technique is used. This not only allows the uterus to become accessible in the abdomen, but also provides a "sound tank" for transmission of the ultrasound waves. The detection of a fetal heart is certain evidence of viability and the coexistence of a viable fetus with a molar pregnancy is exceedingly rare. Certainly if no signal can be obtained by the 12th week, the fetus is not alive or, as fre-

---

DR. ERNEST I. KOHORN, Associate Professor Obstetrics and Gynecology, Yale University School of Medicine, New Haven, Conn.

This work is supported in part by the Constance Baumer Hagedorn Fund, Yale University.

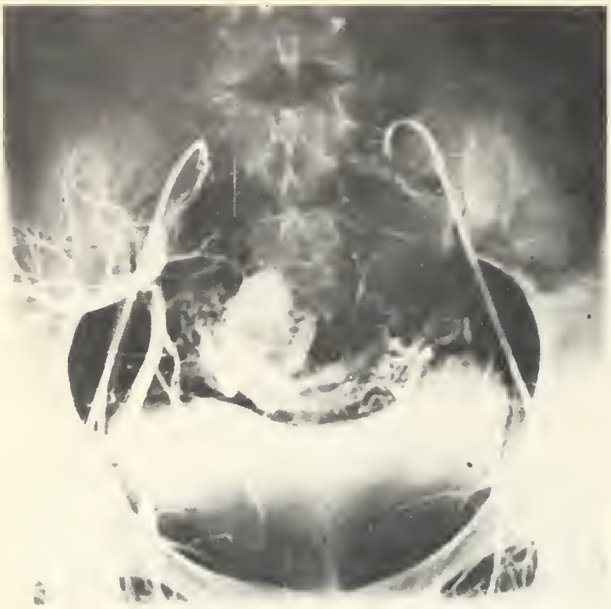

Figure 1

Arteriogram demonstrating arteriovenous malformation characteristic of nonmetastatic gestational trophoblastic disease. (Courtesy Dr. Dana Osborne).

quently happens, there is an error in dates. On such occasions pulsed ultrasound compound B-scanning-sonar can determine the presence of pregnancy and give an estimate of gestational age, or if mole is present, make this diagnosis positively.[5]

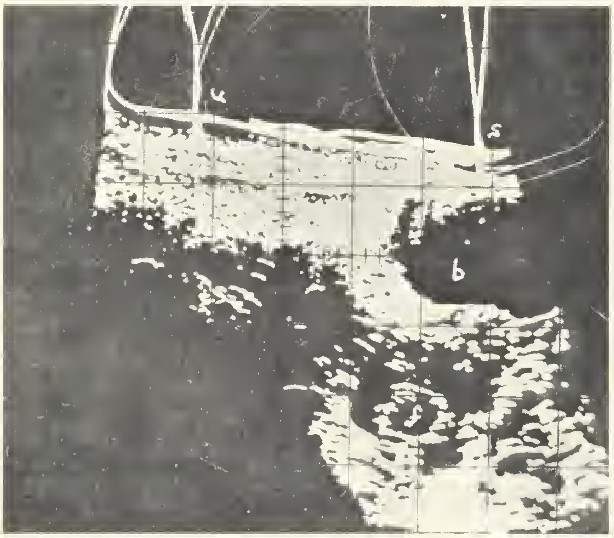

Figure 2

Sonogram of 5 week gestation sac. f: fetal sac, b: bladder, s: anterior abdominal wall at symphysis, u: umbilicus.

By sonar, pregnancy may be visualized by the 5th or 6th week of gestation as a ring-like structure in the slightly enlarged uterus (Fig. 2). This "ring" is the fetal sac. There is a correlation between the dimensions of the uterus and of the fetal sac with gestational age.[16] In threatened abortion, if the fetal sac dimensions are small for precisely known dates, the prognosis for that pregnancy is poor. However, double sacs and apparently broken rings have been seen with normal pregnancy and are not necessarily a sign of impending abortion.[17]

By 10-12 weeks the fetal head becomes visible by sonar (Fig. 3) and its size can then be followed to term, correlating well with gestational age rather than fetal weight. Also, by the 10-12th week the site of the placenta may be visualized (Fig. 4). A low lying placenta at this time may not remain previa because differential growth of the uterus and development of the lower uterine segment "moves" the placenta to the upper uterine segment.

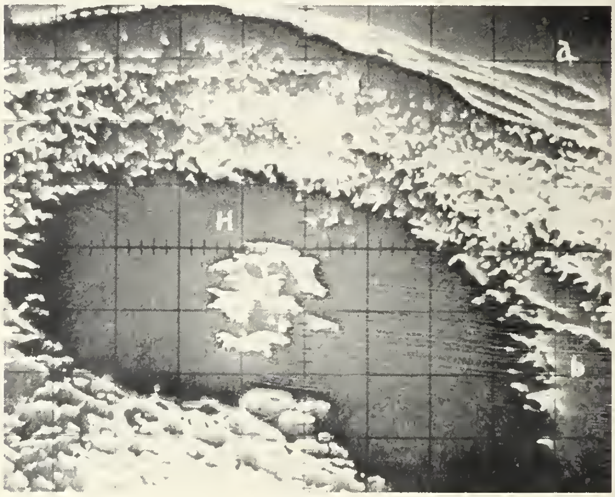

Figure 3

Fetal sonogram showing fetal head at 12 weeks. Actual size, h: fetal head with midline echo visible, b: bladder, a: symphysis.

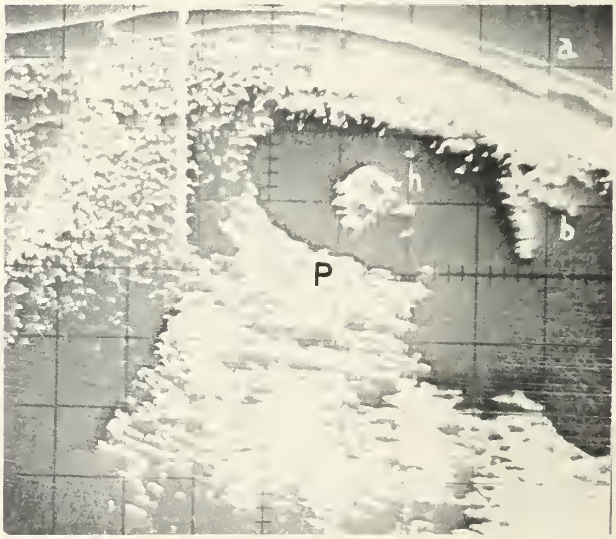

Figure 4

Early sonogram showing 12 week placenta and fetal head. a: symphysis, b: bladder, h: fetal head, p: placenta.

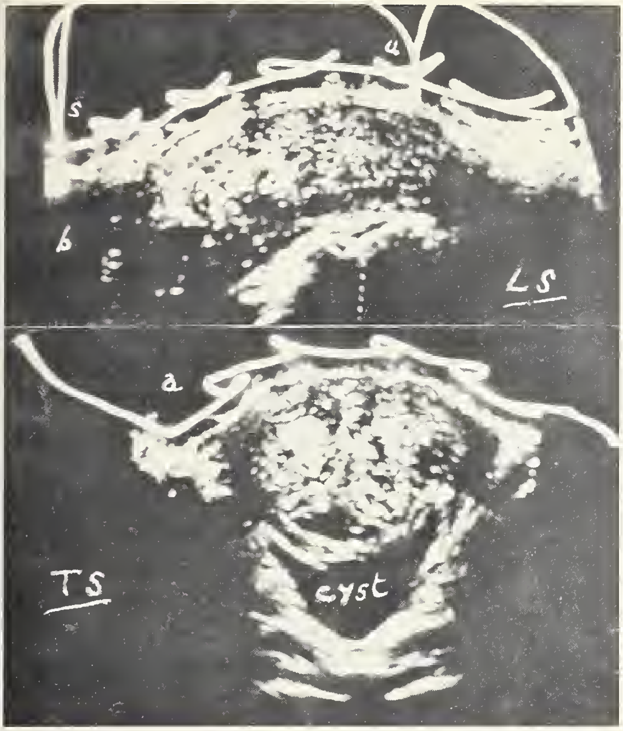

Figure 5

Sonogram showing hydatidiform mole with theca lutein cyst. The characteristic speckling is clearly seen. ls: longitudinal scan, ts: transverse scan, s: symphysis, u: umbilicus, a: anterior abdominal wall, b: bladder.

A great deal of information may thus be gained about the early fetus. If a hydatidiform mole is present, that diagnosis can then be made positively without exposing mother or fetus to irradiation and without using an invasive method of dye injection, arteriography or amniography. Amniography may be reserved for those difficult diagnostic problems where intrauterine blood clot confuses the diagnosis of mole by sonar and in which even with amniography diagnostic experience is required to make the diagnosis.

Management of Molar Pregnancy

The advent of suction evacuation of the uterus has revolutionized the treatment of hydatidiform mole. Since hysterectomy does not affect the prognosis,[18] it should only be done if no further pregnancies are desired and in those rare cases in which pelvic lesions are resistant to systemic or regional chemotherapy. Prior to hysterectomy, suction evacuation will reduce the size of a large uterus so making surgery easier and reducing the incidence of trophoblastic embolisation. If reproductive capacity needs to be retained, suction evacuation aided by syntocinon and ergonovine and accompanied by "light sharp" curettage is the treatment of choice.[2] Hysterotomy has been totally superseded by these methods.

Complications of Molar Pregnancy

Excessive bleeding and sepsis are usually manifestations of late diagnosis and if encountered must be treated by mole evacuation, syntocynon, ergonovine, blood replacement and appropriate antibiotics.

Pulmonary embolisation of molar tissue may be dramatic and life threatening and yet may not represent metastasis. Chest x-ray may have to be supplemented by lung scan and arterial pO2 and pCO2 levels to made an early diagnosis. Supportive treatment with oxygen, morphine and steroids has nearly always been found to be effective. Chemotherapy is usually indicated by the level of the HCG titre and by the persistance of the lung lesion after 2 or 3 days. With trophoblastic embolisation, the x-ray usually clears very quickly and it is because of this phenomenon that pre and post mole evacuation chest x-rays are mandatory.

Prophylactic Chemotherapy

Lewis, et.al.[19] suggested that chemotherapy given prior to primary therapy in hydatidiform mole may reduce the incidence of subsequent trophoblastic disease. Goldstein[13] in a comparative study gave methotrexate and then actinomycin-D 10 µg per kilo prior to evacuation of the mole or within a week following evacuation of the mole. He reduced the incidence of non-metastatic trophoblastic disease and had no metastatic disease. When the dose of actinomycin was raised to 12 µg per kilo only one patient has so far required further chemotherapy among a group of more than 100 patients.

At Yale-New Haven Medical Center the practice of prophylactic chemotherapy was followed until a patient with a Hertig Grade 1 mole developed severe thrombocytopenia and serous ascites following one course of chemotherapy. She has made a satisfactory recovery but at that point the question of prophylactic chemotherapy was reviewed.

In the Eastern United States the incidence of gestational trophoblastic disease following mole is 20-30 percent. Thus with prophylactic chemotherapy 7 to 8 out of every 10 moles would be treated unnecessarily. Furthermore, Smith[10] has shown that even metastatic disease treated early has a very high remission rate. It would therefore seem logical to offer chemotherapy to those high risk patients whose human chorionic gonadotrophin (HCG) levels do not fall speedily following evacuation of the mole. This happens most frequently with patients with urinary chorionic gonadotrophin (UCG) levels above one million per 24 hours or a blood HCG level of one hundred thousand milli-international units per ml.

Monitoring of Trophoblastic Disease

Trophoblastic disease is remarkable for the fact that the greater the malignancy of the choriocarcinoma the greater the production of HCG. Since most commercial pregnancy tests are adjusted to give a negative reading below 800 iu of UCG and since significant trophoblastic disease may be present with lower levels of HCG, the more sensitive radio immunoassay of HCG should be used. Problems of interpretation did arise because the assay also measured luteinising hormone (LH). Recently a specific assay for human chorionic gonadotrophin beta sub unit* (HCG BSU)[7] has become available so that patients should now be followed to zero levels of HCG BSU and not to physiologic (pituitary) levels of LH (less than 100 milli iu per ml.).

The patient is followed with blood tests at weekly intervals until 3 successive zero readings are obtained. She is then tested monthly for 6 months and every 2 months for a further 6 months. During this time effective contraception is mandatory.

Management of Persistent Disease and of Metastatic Trophoblastic Disease

Fifty per cent of gestational trophoblastic disease follows hydatidiform mole, the remainder abortion, or even normal pregnancy. Examination of the original specimen in such cases of "choriocarcinoma" may on occasion show hydatidiform placental degeneration. With the advent of frequent therapeutic abortion it becomes important to examine the products of conception histologically, and 3 such cases of mole have been diagnosed in our hospital in the past year.

The treatment by chemotherapy of trophoblastic disease both gestational nonmetastatic and metastatic is similar. Nonmetastatic disease is defined as persistently elevated HCG levels in the absence of demonstrable metastases which have been excluded by careful physical examination, chest x-ray (including laminography if necessary), liver function tests, and liver scan. It is our practice to treat patients with actinomycin-D 12 μg per kilo for five days. Therapy requires familiarity with the administration and toxicity of the drug and should only be done in an institution with facilities for platelet transfusion and the care of the leucocyte deficient patient. Courses are repeated as toxicity permits until a falling HCG titre reaches zero. If the titre does not fall, methotrexate is alternated with actinomycin-D. In certain high risk cases such as those with liver or cerebral metastases, initial triple therapy with actinomycin, methotrexate, and cytoxan may be given. With cerebral metastases this may be supplemented by head irradiation and with liver metastases with radiation or specific infusion. Such infusions may also be used in non-metastatic pelvic disease (demonstrated by angiography) which resists systemic treatment.

Subsequent Pregnancy

Van Thiel, et.al.[11] showed that of the 91 mothers treated at Bethesda for trophoblastic disease, 50 subsequently had 71 children. The incidence of congenital abnormalities and abortion was no higher than normal. The experience in Boston[20] with the use of prophylactic chemotherapy for hydatidiform mole suggests there may be a slightly increased incidence of abortion among the patients treated with chemotherapy compared with mole patients who had no chemotherapy. Nevertheless, the prognosis for successful pregnancy following trophoblastic disease appears excellent. A sonar examination early in that pregnancy will confirm a normal intrauterine gestation.

Experience at Yale 1971 to 1973

In November, 1970, a patient with widespread trophoblastic disease who presented late with severe respiratory difficulties and uterine bleeding died. This experience led to the development of a team to manage patients with trophoblastic disease so that experience could be accumulated and applied in the management of the difficult case.

During the period January, 1971 to December, 1973, 30 patients with hydatidiform mole and trophoblastic disease have been seen. Three additional patients with hydatidiform degeneration of the placenta have also been followed.

Of the 30 patients seen, 21 had hydatidiform moles. Seven of these received prophylactic chemotherapy. This practice has now been discontinued and prophylactic chemotherapy is given only to those patients with mole who have an initial HCG BSU of greater than 100,000 i.u. per ml and histology showing Hertig Grade 3 or greater. Such patients may have a significant risk of developing trophoblastic disease.

Eight patients presented with non-metastatic gestational trophoblastic disease and all these have responded to treatment. During this time there has been one case of metastatic disease to the lung and she is now in remission for 2½ years.

Two of the cases seen in 1971 have delivered normally and two more patients are pregnant. All 4 had chemotherapy, 2 for prophylaxis and 2 for non-metastatic disease (Fig. 1 is the lesion in one of these).

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*The alpha chain is common to many pituitary trophic hormones. It is the beta chain that is specific for each modality.

TABLE I

COMPARATIVE RESULTS OF THERAPY OF TROPHOBLASTIC DISEASE AT TROPHOBLASTIC CENTER AND IN OTHER HOSPITALS

	No. of Patients	*Deaths*
Treated at Center	151	9
Treated at 82 hospitals outside center	93	42

from Brewer, et.al.[3]

Conclusion

A combination of clinical alertness, ultrasound diagnosis, HCG estimation and individualized early therapy can largely eliminate morbidity and mortality in molar pregnancy and trophoblastic disease.

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ABDOMINAL MIGRAINE SYNDROME

Various writers have classified as a syndrome the symptoms of abdominal pain, nausea, vomiting, and sometimes diarrhea that are frequently a conspicuous part of the clinical picture of migraine (Brams, Blumenthal). The abdominal migraine syndrome is seen primarily in children or in adults who have had migraine for many years. Typical is a history of colic as a baby and a family history of headache or biliousness or both. Not infrequently the abdominal symptoms continue during childhood without attacks of headache, or may alternate in their occurrence with attacks of cephalalgia, or may continue after the headache has ceased. Parenteral administration of ergotamine usually causes prompt subsidence of symptoms. Desensitization with intravenous histamine affords more prolonged relief. (Brams, W.: *Illinois M.J.* 48:244, 1925.)

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Depression in the Aged
Its Diagnosis and Treatment

Charles P. Neumann, M.D.

Depression or Melancholia, as it was first named by Hippocrates in the fourth century B.C., is probably the most prevalent emotional illness encountered today. It is reasonably estimated by many sources that its sufferers number in the millions and that approximately 8% of men and 16% of women can expect to have a depressive illness in their lifetime. Depression can occur at any time in the life span, but only recently has this syndrome of depressive illness been given the attention and gratifying treatment that it deserves. In any patient over 60 years of age admitted to a hospital because of apparent senile or organic psychoses, depression should be a primary consideration in the initial differential diagnosis. As high as 60% of those admitted for the diagnosis of chronic brain syndrome will be discovered to be suffering from depression, which with proper treatment, will result in a matter of a few weeks or months in vast improvement, discharge from the hospital and return to a happy and active life.

This conclusion in itself highlights the fact that in an age group where so many medical conditions are untreatable, depression in the aged is not only treatable, but in many instances is a completely reversible condition. Before proceeding to a detailed discussion of depression in the aged, if it is untreated, may eventuate in suicide. Unfortunately this is often forgotten. The well-meaning clinician may humanistically be inclined to deny the fact that suicide can occur in these elderly patients. But statistics suggest the opposite. And the forces which motivate suicide are clear and often overwhelming. The patient is alone and feels totally unable to face the loneliness that confronts him. Life no longer has purpose, direction or meaning. The individual no longer feels needed or wanted. Unable to sustain himself, the aged or depressed individual may see himself as worthless and as a burden to others. Any one or all of these reasons can provide the motivation for suicide among the old and isolated.

In the evaluation of any medical problem in the aged, a depressive reaction should be a primary consideration in the differential diagnosis, particularly since depressions of later life are so prevalent and responsive when recognized and treated promptly. All too frequently however, the consideration of depression is an after-thought reached by a process of elimination. Time and again, psychiatrists are called by competent and conscientious family physicians to see a patient with a history of vague somatic complaints which have been extensively evaluated by every conceivable laboratory and X-ray test, and all have been found to be negative. The family physician concludes that the problem is emotional and seeks the assistance of a psychiatrist. Only by default is a phychiatric illness considered. Finally, the possibility of depression as a primary diagnosis has moved into its proper perspective.

What should the physician look for if he is mindful of the possibility of geriatic depression? What does depression in the aged look like, and what is the differential diagnosis?

Perhaps the cardinal sign of depression in the aging is the onset of somatic symptomatology, volunteered and described by the patient for the first time. Characteristically the symptomatology is vague and may at first listening seem relatively unimportant and insignificant. More often than not it is abdominally oriented with a concern most frequently centered about bowel function. However, any organ or area of the body can be involved. The importance of the vagueness of the description of symptoms cannot be overly stressed, for it appears that this vagueness is purposeful, although probably not on a conscious level. The aging person's best and often most trusted confidante is his family physician, and the patient presents these symptoms to his mentor in an effort to solicit his interest and concern. Yet he does not wish to present his somatic preoccupations in so alarming and dramatic a fashion, that his trusted physician will view this new "illness" in such grave terms that he will at once refer the patient to a new and strange specialist for a battery of elaborate and expensive laboratory tests or into a large and impersonal hospital setting.

The "vague new symptom" then is the red flag of danger which should alert the physician to the possibility and consideration of a depression in an aging person. This is the time when the physician, busy as he is, and what physician is not too busy—should find and take the time to talk or perhaps to chat with this individual in a frank, interested and open manner. As he chats, he will soon detect anxiety and concern in his patient. Most frequently this

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anxiety and concern will center about the loneliness and lack of purpose in his life situation. As the discussion continues, the elements of sadness or depression will surface as the patient describes the hopelessness and lack of direction in his life situation. It will soon become evident that the patient is about to, or already has, given up attempting to keep pace with the demands of everyday life and is withdrawing or has withdrawn into a cocoon-like existence in his home situation. Not infrequently as the patient discusses and enlarges upon the total life situation, after having introduced that "vague new symptom," the emotional floodgates will break, and the patient who has always presented himself as the "Rock of Gibraltar" type of individual, will burst into tears, and of course when this happens, there is absolutely no doubt as to the diagnosis of depression.

Finally, in this "diagnostic discussion" there will almost always surface a raison d'etre for the precipitation at least of this depression. Typical reasons are retirement, the loss of a spouse or a loved one, or a serious medical illness which has suddenly impressed upon the individual that he is older than he cares to acknowledge, and whose personal security is tremendously threatened.

Further questioning which will confirm the diagnosis are (1) a marked and constant anorexia and (2) a feeling on awakening in the morning that the individual is almost unable to arise from his bed and face the long and impossible day ahead.

Then, in summary, the cardinal triad of signs of depression in the aged are (1) new but vague somatic symptomatology, (2) self-concern and (3) hopelessness about the future.

In the initial interview when the diagnosis of depression of the aged is first considered, the possibility and probability of suicide must of necessity become a part of the discussion. And it must be introduced frankly and openly. There are those who will argue that to introduce the subject of suicide to such a patient may inject this idea for the first time into the individual's thinking, that the patient may begin to dwell on this and subsequently react to this concept without overt action. They will argue that had not the physician proposed this thought, a subsequent suicide would never have happened. In our experience nothing could be farther from the truth. Indeed, it is our experience and our belief, that no suicide has been precipitated in any depression at any age by such a discussion. A simple inquiry of the patient as to whether life is worth living will almost inevitably bring forth a complete and detailed response in totally truthful terms, and accompanied by an obvious sense of relief that the question has been brought fully into the open. It is a must that the question of suicide be a primary and open consideration in this initial diagnostic interview.

What is the differential diagnosis when depression of the aging is a consideration? First and foremost of course, is that an organic pathological process not be overlooked. But the vague description of somatic symptomatology previously discussed will almost automatically rule this out. If there is any question still, a few relatively simple laboratory or roentgenological tests will contribute to this conclusion.

Secondly, a differentiation must be made between a grief or loss reaction. When an aging person is abruptly retired, suffers the loss of a spouse or suffers financial reverses—it is most reasonably expected that he would and should develop some anxiety and apprehension about himself, his situation and his future. An element of sadness and hopelessness in such a situation is most reasonably to be expected. But the key to this differential diagnosis lies in two areas. Is the degree of anxiety appropriate or inappropriate to the situation, and is the duration of the anxiety and depression limited to a relatively brief period which again is appropriate to the situation? Thus if one can apply the term appropriate to these two factors, one is dealing with a grief or loss situation which will spontaneously subside, and not with a depression.

The third and most difficult differentiation is the determination between an organic brain syndrome due to cerebral arteriosclerosis or other cause for a depression of the aging. Often this is a most difficult decision to make, for not only are processes at work in some individuals, but there are some similarities between the two that add to the perplexities of delineation. Both groups may complain of vague somatic symptomatic areas, while in the organic brain syndrome, vagueness characterizes all descriptive areas. Confusion in many areas and depressed intellectual functioning characterize the organic brain syndrome and not the depression. And significantly the organically involved individual has a propensity to lower his standards of personal appearance and personal hygiene to an easily and obviously apparent degree. Most important however, is the determination as to whether memory is impaired. In the depressed patient one is invariably impressed with the detailed memory that this patient exhibits.

Indeed the depressed patient utilizes his intact memory to fortify and buttress his depression by comparison with his early life. But the organic brain syndrome shows a characteristic and almost total loss of recent memory, while remote memory remains intact, and the organically involved individual as a result lives almost totally in the past with no concern or apprehension about his present life, let alone his future. Therapy of these depressions will be subsequently discussed, but it should perhaps be noted here that when a differential diagnosis between the depression of the aging and organic brain syndrome is most difficult or impossible to make, response to therapy may provide a valuable diagnostic aid. The depression will often respond to antidepressant drug therapy, while the organic brain syndrome of course, will not.

An important issue in the consideration of depression in the geriatric patient is the excessive use of alcohol by these troubled persons. Following a meaningful loss and as the problems of advancing age become more threatening, it is not at all uncommon for these older people to turn to alcohol as a means of blurring the problems of reality and escaping the pain resulting from anxiety and depression. The problem of alcohol may become one of such long duration and of such severity as to become totally disabling, and it may even be considered not only the presenting but also the only clinical problem. But the physician who sees a geriatric patient with a history of years or even months of heavy drinking and merely labels the patient as an "alcoholic" may be doing the patient a great disservice. If the physician fails to recognize the essential underlying dynamics of depression and that the alcoholism is in reaction to this depression, and masking the depression as well, he cannot possibly treat the patient adequately and effectively.

In order to treat properly the depression of aging, it is important that the physician understand some of the dynamic differences between the depressions of aging and those occurring in the earlier phases of life. In the depressions of younger years, we see a pathologic process which distorts the mood and thinking of an individual to a degree of morbidity and to such a distance from reality as to render the individual totally incapacitated. This is not true in the aged person. He becomes depressed from a recognition of the limitations and liabilities that advancing age has placed upon him, and becomes depressed in reaction to reality, not as a distortion of reality. In the depressed group of younger patients, psychotherapy can be directed toward restoring a true perspective of reality and be very beneficial but obviously this cannot be done with the older individual who though depressed, sees reality "like it is."

What then, having recognized the dynamics of depression in the aged and having made the diagnosis correctly, can the family physician do in the issue of treatment? As noted much of the depression which these aging patients experience is based on reality loss and behind their symptomatology is a clear cry for understanding and support. They want to talk to a personal physician who is a friend and trusted, whom they feel will be able to understand and empathize with their plight. It is important that the physician give these patients a chance to express their feelings and not "turn them off." The physician must indicate to the patient that what has happened to him is understandable, and not a sign of weakness or impending catastrophe. Finally, he must reassure the patient that with a combination of his continuing support and other treatment modalities, marked improvement and resolution of the depression can be expected in a relatively short time. For the busy practitioner it is not easy to find the time to provide this support, but it can and should be given by the family physician. He can certainly do it as well, and probably more effectively than a new and strange psychiatrist who is suddenly injected into the patient's life and has nothing additional to offer in terms of psychotherapy.

With the increasing emphasis on pharmacotherapy, every physician tends to correlate therapy of depression with the use of anti-depressant drugs. In the pressure of a busy practice many physicians will turn to pharmacotherapy as the sole method of treatment. Rarely for reasons just previously noted, is this adequate for recovery. Supportive therapy must be a part, and employment of anti-depressant drugs in conjunction with this, will in approximately 50% of these cases result in a prompt and complete resolution of the depression.

If pharmacotherapy is to be used, dosages must be employed in the range recommended by manufacturers for other depressions. There is a tendency on the part of physicians to reduce drug dosages in the treatment of older people. In the case of the geriatric depression to reduce dosage is to invite failure of treatment. However, there are limitations to pharmacotherapy in these older patients as in contrast to other depressed groups. Side effects of these drugs are much more frequent and more severe and may of necessity lead to a discontinuance of the use of the drugs. I refer particularly to the very prominent side effects of orthostatic hypertension and genito-urinary problems, particularly urinary retention.

Hopefully the combination of supportive psychotherapy and drug therapy will produce resolution of 50% of depression reactions in the aging within a period of six weeks. But what if this combination is not effective or suicide appears to be a possibility? Then inpatient therapy is clearly indicated. And reference is made to inpatient or residential therapy in a psychiatric hospital or unit, and not in a general hospital where a patient can be more isolated in his hospital room than he ever was at home. In a psychiatric hospital, the staff and program are oriented to a 24 hour a day involvement with the patient, and the milieu, warmth and interpersonal relationships which this provides the patient, is in itself a healing force. And the unambivalent interest of the hospital staff in the patient is a most rewarding offset to the fawning concern of family members which may on one hand reflect guilt and on the other, an avaricious interest in what the old gentleman or lady might leave them in their will.

In the residential setting, the heightened degree of supportive therapy plus pharmacotherapy will produce a resolution of depression in a high percentage of those cases which were refractory to therapies as office patients and the results are most gratifying.

Unfortunately there are some cases of geriatric depression which will prove stubborn and refractive even with the intensive therapy of a residential setting. In these cases electro-convulsive therapy then becomes the treatment not only of choice but of necessity. For reasons that we do not fully understand, ECT has become a much maligned therapeutic modality. Perhaps this feeling has resulted from too wide and too indiscriminate use of ECT in the years gone by. But long before the advent of anti-depressive drugs, it was the specific therapy for depression, and in our opinion it remains so today. It is of course, essential that a diagnosis of depression be established. Then complete and thorough medical consultation may be indicated to determine any physical problems present. But once these are determined, with the assistance of competent medical and anaesthesiologist support, there is almost no age or medical contraindication to ECT and the most refractive depression will ultimately respond.

In this paper, we have attempted to acquaint you with the incidence of depressive reactions in the aging, the recognition of this problem and methodologies of treatment which result in a very high percentage of success. In conclusion, we would wish to emphasize that the depressed geriatric patient is an extremely gratifying individual with which to work. Unlike the adolescents who immediately inspire empathetic interest and concern, the elderly patient is often the subject of subtle and studied neglect by many physicians including psychiatrists. It should be remembered that if properly diagnosed and treated, the likelihood of returning these older depressed patients to a meaningful and more satisfying existence is considerable. Furthermore, in contrast to the adolescent who may be searching for his identity, these individuals have in general established a clear sense of identity and once this is re-established, through resolution of the depression, can once again proceed through the remainder of their lives most effectively on their own.

To summarize and illustrate the process of evaluation, diagnosis, dynamic understanding and treatment of depression of the aging, the following case is presented.

Mrs. N.F., a 62 year old widow of several years' duration, was admitted to the Silver Hill Foundation in a severely depressed condition. The history revealed that three years prior to admission, her only son left home to enroll in a graduate degree program, and for the first time in her life, the patient found herself totally alone and without interests. She became totally withdrawn and disinterested, and seemed to have no other occupation or preoccupation except feeling sorry for herself. Mrs. F. did not respond to the attentions of her family physician or anti-depressant drugs, and finally hospitalization was recommended.

The patient accepted hospitalization reluctantly and wept continuously the first 24 hours. Initially the patient improved slightly in that her weeping ceased and she began to eat and sleep well. But again she did not respond to large dosages of anti-depressant drugs, and after 6 weeks without further improvement, the patient was begun on electro-convulsive therapy three times per week. The patient responded dramatically with 8 treatments and moved out of her depression. She began to participate in the program of activities, socialize with other patients, and adopted an optimistic attitude toward the future. Within one month after the course of electroshock therapy, the patient was discharged to her home, no longer depressed and with a well-thought out and well-organized plan for an active life, which she is following happily to this day.

This is a most successful result to be sure, but it is typical of what can be accomplished with prompt recognition and proper and energetic treatment of depressions of the aging.

Atrial Myxoma Presenting Without Cardiac Manifestations

Walter S. Morgan, M.D., Charles B. Carrington, M.D. and Ward J. McFarland, M.D.

ABSTRACT—A case of left atrial myxoma is presented occurring in a thirty-five year old woman. The diagnosis was not suspected prior to death. The clinical manifestations were unusual because the patient had no cardiac complaints or findings and because the disease presented with arthralgias and myalgias which occur uncommonly in this disease.

Key Words: Atrial, Cardiac, Manifestations, Myxoma, Without.

During the past two decades the ante-mortem diagnosis of left atrial myxoma has been made with increasing frequency. Several relatively large series have been reported including most notably that of Goodwin and recently that of Seltzer *et al.* It has been repeatedly stressed that patients with left atrial myxomas have cardiopulmonary, embolic, and constitutional manifestations. A review of the literature of atrial myxoma discloses almost no instances in which a patient with this pathologic entity had no symptoms or signs of cardiac disease. For this reason the following unusual clinical presentation is reported.

A thirty-five year old married mother of two children was first seen in consultation in October, 1970. In early 1970 she began to have migratory joint pains involving almost all of her joints and also pain in the muscles of her thighs and calves. There was very little swelling or stiffness of the affected joints which remained painful for only a few days before the pain would migrate to other joints. She also noted intermittent cyanosis of her toes with one or two toes affected at any one time. The toes were not painful. Latex fixation, uric acid, urine culture, complete blood count and sedimentation rate were normal. She was at no time febrile. She was begun on Indomethacin with partial relief.

Past history and system review disclosed a two year history of tendonitis in both shoulders treated with multiple injections of steroids. She had a long standing dermatitis of the soles of her feet consisting of red macules which were variably conspicuous. She had no cardiac or pulmonary complaints. The patient's mother was diabetic and had gout.

Physical examination disclosed normal vital signs. The patient presented as an intelligent, attractive woman who did not appear ill. Positive findings included a red, macular rash on the soles of both feet and cyanosis of several toes. Heart examination was entirely normal. Chest X-ray and electrocardiogram were normal. Complete blood count, urinalysis, lupus erythematosus preparation, latex fixation, antistreptolysin O titer, blood sugar, blood urea nitrogen, uric acid and cholesterol were normal. Sedimentation rate was 26mm/hr. X-rays of all affected joints disclosed peritendonitis of both shoulders and minimal hypertrophic arthritis of the lumbar spine and both knees.

Colchicine was tried to exclude gout and had no effect on her symptoms.

The patient was next seen in June of 1971 at which time she reported persistence of her symptoms and the development of fever in the range of 99.2 to 99.6° F. It was decided to hospitalize her for further study.

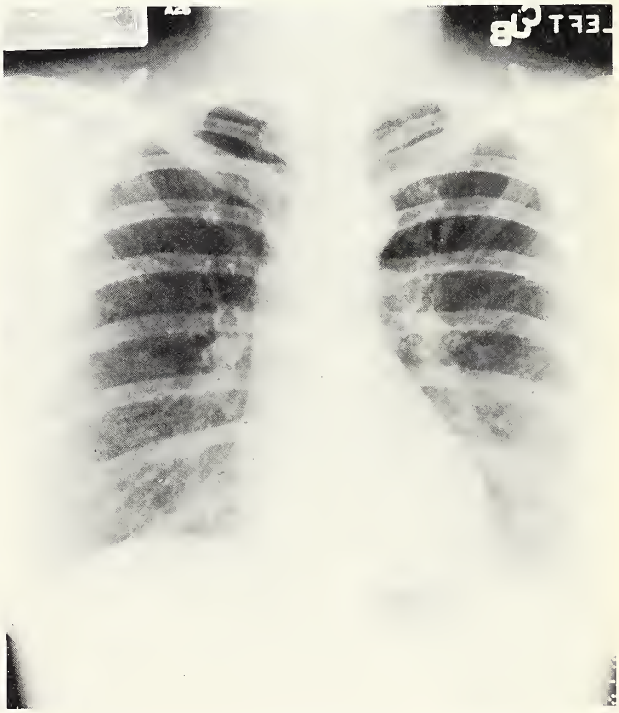

Figure I.
Chest X-ray at time of first hospital admission in June, 1971.

DR. WALTER S. MORGAN, Assistant Clinical Professor of Medicine, Yale University School of Medicine.

DR. CHARLES B. CARRINGTON, Associate Professor of Pathology, Yale University School of Medicine.

DR. WARD J. McFARLAND, Intern, Surgical Service, University of Alabama, Birmingham, Alabama.

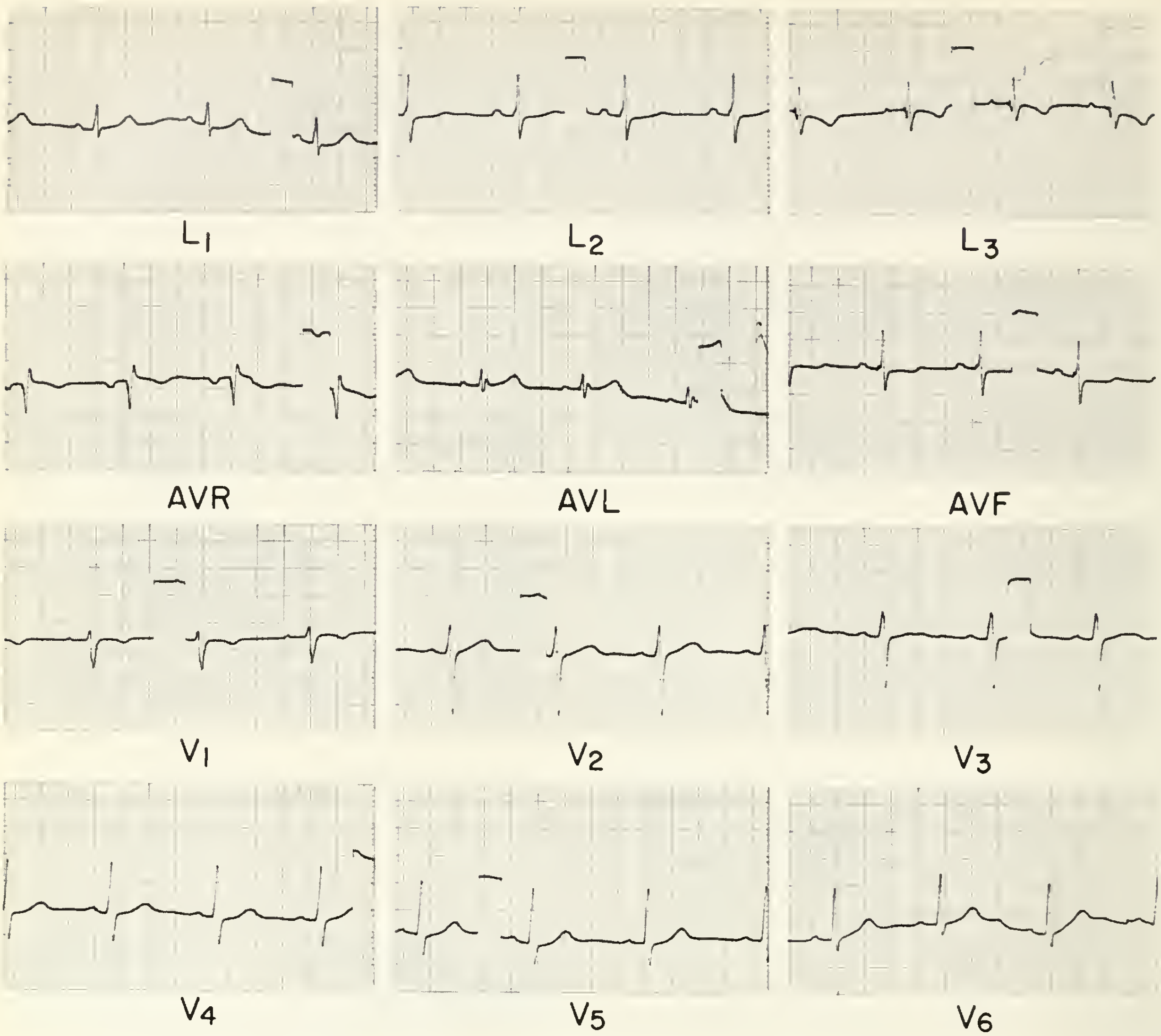

Figure 2
Electrocardiogram at time of first hospital admission in June, 1971.

On admission she appeared in no acute distress. The rash on the soles of her feet was present as previously described. Cyanosis of her toes was not conspicuous. Careful examination of the heart by several observers disclosed no abnormal findings. A mild temperature elevation was present during her hospitalization. Sedimentation rate was 32mm/hr. Urinalysis disclosed microscopic hematuria. Hemogram, cultures of the throat and urine, lupus erythematosus preparation, antimuclear factor, rheumatoid factor, blood chemistries and liver function tests were normal. Chest X-ray (Fig. 1) was normal as was the electrocardiogram (Fig. 2). An intravenous pyelogram disclosed some scarring of the right renal cortex and calyceal changes considered probably secondary to previous pyelonephritis. She was seen by a dermatologic consultant who diagnosed her dermatitis as dyshydrosis. A skin biopsy was taken but this was not diagnostic. The patient was discharged as "undiagnosed periodic joint syndrome" and "hematuria, cause to be determined."

Following discharge the patient was seen by a urologist who found urethral trigonitis and applied silver nitrate; the hematuria disappeared following this treatment and it was concluded that it had been caused by the inflammation.

Later in the summer she was seen in follow-up and complained of episodes of epigastric pain and vomiting. This became troublesome enough in November, 1971 to warrant X-rays of the gallbladder and the upper and lower gastrointestinal tract. These X-rays were negative and her abdominal symptoms disappeared as mysteriously as they had come. She was not seen again by the author for the next six months but was said to have enjoyed improved health. Early in January of 1972 her physician reported a brief but peculiar episode which involved pain in one ear and seemingly reduced hearing. This problem subsided in a few hours and did not return.

In May she was found unresponsive on the kitchen floor and was sent by ambulance to Yale-New Haven Hospital. Examination on admission disclosed an obtunded, aphasic white woman with a right hemiparesis. The left pupil was unreactive and the left fundus disclosed an occluded left retinal artery. She was seen by neurologic and ophthalmologic consultants. It was believed that vasculitis associated with a collagen disease and thrombosis of the left internal carotid were likely and the patient was started on intravenous heparin. She was also given steroid therapy in the form of Solu-cortef. On the evening of admission the patient suddenly underwent deterioration consisting of respiratory irregularity, a succession of arrhythmias, flaccid extremities and fixed pupils. The patient was supported for two days by mechanical breathing and blood pressure maintenance but expired after three days in the hospital. Laboratory data again was unrevealing including a normal electrocardiogram. Her sedimentation rate was 35mm/hr.

At autopsy a 4cm. cardiac myxoma was found in the left antrim (Fig. 3). This consisted of soft, almost gelatinous, translucent fronds of tissue. The tumor was attached to the atrial wall near the foramen ovale through a narrow stalk-like base 1cm. in diameter (Fig. 4). Within this stalk could be seen the arteries and veins which provided the tumour's blood supply. Throughout the left atrium the endocardium was slightly thickened and opaque. Microscopically the tumour was remarkably uniform in structure from field to field. Stellate, rounded and spindle-shaped cells were scattered sparsely through a palely stained "myxomatous" ground substance. The heart was otherwise grossly and microscopically normal and weighed 370 grams (including the myxoma). The brain was swollen, soft and friable and weighed 1480 grams. There was a modest subarachnoid haemorrhage over the base. On the left there was a large haemorrhagic infarct at the level of the tuber cinereum involving the basal gray matter and extending laterally to the sinular cortex. Medially the haemorrhage had ruptured into the lateral ventricle, and the entire ventricular system was filled with blood (Fig. 5). At the level of the mamillary bodies the left middle cerebral artery was occluded by gray tissue which was identified microscopically as an embolus from the atrial myxoma. Many of the tumour cells had pyknotic nuclei but the tissue was in other respects identical to that in the heart. Microscopic examination of the left ocular globe revealed additional tumour emboli in several small posterior ciliary and chorodial vessels.

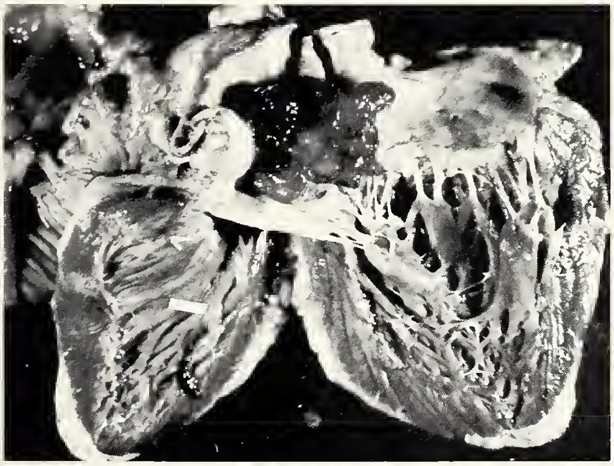

Figure 3

Left side of heart. The gelatinous myxoma is seen in the left atrium extending almost to but not through the mitral valve. The left atrial endocardium is slightly thickened throughout.

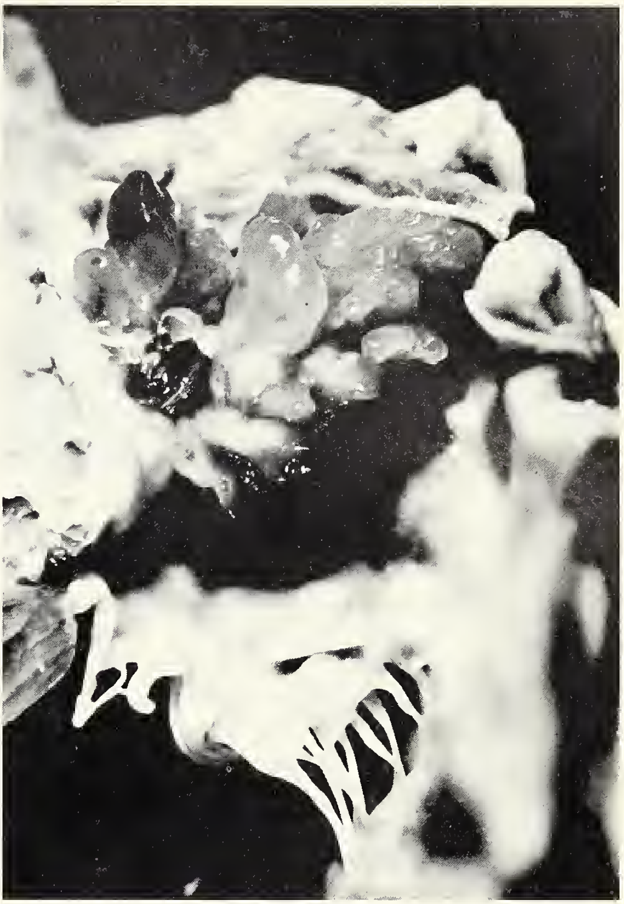

Figure 4

In this view can be seen the stalk-like base of the myxoma and one of its blood vessels (white line in the center of the stalk). Note that the tumour is arranged in fronds or fungi-like projections radiating from the point of attachment.

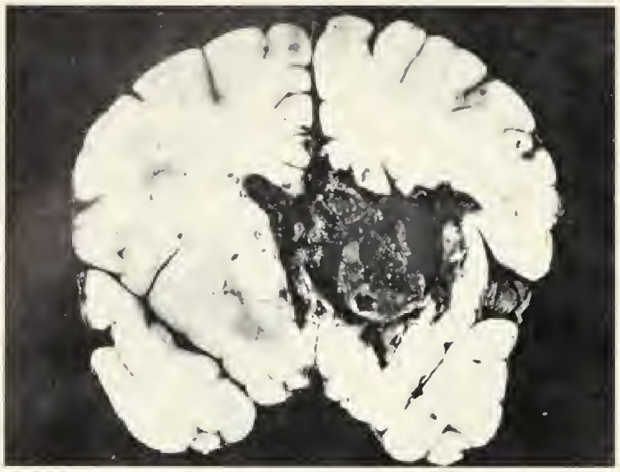

Figure 5
Haemorrhagic infarct in brain and blood-filled ventricular system.

There were several superficial scars in the left kidney and one 3cm. scar in the right kidney. These were interpreted as healed infarcts from earlier episodes of embolization, although in this healed stage there was no way to prove such origin. No tumour emboli were seen in the renal vessels but as expected for this age the renal vascular sclerosis was also negligible. Other anatomical findings included acute congestion of the lungs, liver, and spleen and early focal pneumonia. A small venous malformation in the left anterior frontal matter of the brain was interpreted as an unrelated, incidental lesion.

Discussion

The most unusual aspect of this patient's presentation was the total absence of any cardiac or pulmonary symptoms and signs. The majority of patients with left atrial myxoma have clinical findings suggesting mitral valve disease, most commonly mitral stenosis. At no time did the patient complain of dyspnea or other symptoms suggesting obstruction to the left ventricular filling or inflow from the pulmonary veins. This absence of the expected cardiac manifestations made us particularly interested in whether the tumour, although sizable, was sufficiently large to obstruct the mitral orifice. Although a piece of the myxoma broke off when the heart was opened, it appeared to us that the tumour did not extend into the mitral orifice and that this fact accounted for the lack of cardiac manifestations. Despite auscultation by a number of observers at different times and with the patient in various positions no murmurs, tumour sounds, opening snaps or other abnormal sounds were heard. In addition, neither her chest X-ray or electrocardiogram gave any clue suggesting left atrial pathology.

The manner in which emboli occurred was interesting. She exhibited intermittent cyanosis of individual toes and also Raynaud's phenomena. Whether these peripheral vascular episodes were secondary to minute emboli or represented a peculiar constitutional response is unclear. It is clear that embolization to the kidneys occurred and it seems likely that emboli to the mesenteric vessels may have accounted for her bouts of abdominal pains and vomiting. The final embolic events were fatal and caused a massive haemorrhagic infarct to the left cerebral hemisphere as well as central retinal artery occlusion.

The patient's constitutional manifestations were not very conspicuous. Fever was present only minimally. The sedimentation rate was moderately elevated. Anemia, leukocytosis and hypergammaglobulinemia were absent. Interestingly, her most important symptoms were migratory arthralgias and myalgias. While these complaints have been described in atrial myxoma they appear to occur with relative infrequency. In this patient they dominated the clinical presentation prior to her fatal terminal event.

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Measles Outbreak in Northeastern Connecticut: Epidemiology and Vaccine Efficacy

M. DeWayne Andrews, M.D. and James McElroy, M.D., M.P.H.

Abstract—In November and December 1972, 134 cases of measles occurred in public school children grades K-8 in Plainfield, Connecticut. Eighteen cases occurred in children previously vaccinated with live measles vaccine, although 5 of these received it in a manner contrary to recommended practices. Overall attack rates were 1.1 in vaccinated children and 27.0 in unvaccinated children. Vaccine efficacy was calculated to be 95.9%.

In November and December 1972, an increasing number of measles cases were reported from several towns in northeastern Connecticut. As a result, several local directors of health and physicians expressed concern about the efficacy of measles vaccine administered to children in this region over the past 7 years. Their concern emanated primarily from the impression that as many as 15-20 percent of the measles cases were occurring in children previously immunized with measles vaccine. Because of this serious challenge to measles vaccine efficacy, an epidemiologic evaluation of the outbreak was undertaken.

Methods

The Plainfield public school system was selected for the study for several reasons: 1) a large number of the measles cases reported from the northeastern region occurred in the town of Plainfield, 2) little information about preschool children was easily obtainable and few cases were reported in this age group, 3) measles cases in parochial schools did not contribute significantly to the total, and 4) excellent school health records were available for this population. Only grades kindergarten through 8 were included in the study since no cases of measles were known to have occurred in grades 9 through 12.

This study was necessarily retrospective, and the investigators could not examine most of the patients. We counted any case reported as measles to a school nurse whether or not the child had been seen by a physician. Parents were asked about such symptoms as high fever, cough, coryza, conjunctivitis, and characteristic rash.

In order to analyze this outbreak it was necessary to determine the vaccination status of the population at risk. Health records of the Plainfield public school system are generally complete and are updated yearly with respect to vaccination status. From these records, the school nurses counted those students with no history of having received measles vaccine or no history of measles infection prior to November 1972, i.e., the unvaccinated population at risk. Because of clerical problems which were encountered, in determining the vaccinated population at risk no distinction was made between vaccine recipients and those who had had measles infection prior to November 1972. Although this grouping tends to bias the results toward a lower attack rate for vaccinated children, those with prior measles infection represented no more than 1 to 2 percent of the total immune population as determined later by a random sample analysis of records.

Results

Plainfield has an approximate population of 12,000 with a rather stable base in terms of mobility. The school age population (K-12) is 3,307. Although there are parochial schools in the town, most school age children are enrolled in the public school system, which is comprised of 2 schools grades K-3, and one school each of grades 4-6, 7-8, and 9-12.

Although most of the affected children were not seen by physicians, according to the criteria mentioned above, we identified a total of 134 cases of measles in children in grades K-8 in November and December 1972. The school status and attack rates for these cases are shown in Table 1. The overall attack rate was 6.5 cases per 100, with the highest rate for grades 4-6.

According to the method described for determining vaccination status, of 2,069 children studied, 1,639 (79.2%) were vaccinated and 430 (20.8%) were unvaccinated prior to November 1972 (Table 2). Of the 134 cases of measles identified, 18 (13.4%) were in children who had received measles vaccine prior to the current outbreak; each of these was investigated. Measles attack rates by school and vaccination status are shown in Table 2. The overall attack rates were 1.1 for vaccinated children and 27.0 for unvaccinated children. Unvaccinated children in grades 4-6 had the highest attack rate (56.1).

DR. M. DEWAYNE ANDREWS, Epidemiology Section, Preventable Diseases Division; DR. JAMES McELROY, Chief, Epidemiology Section, Preventable Diseases Division, all at the Connecticut State Department of Health, Hartford, Conn.

TABLE 1

MEASLES CASES BY SCHOOL STATUS,
PLAINFIELD, CONNECTICUT
NOVEMBER - DECEMBER 1972

Grades	*Population Enrolled*	*No. Cases*	*Percent of total cases*	*Attack rate (cases/100)*
K-3	985	61	45.5	6.2
4-6	687	62	46.3	9.0
7-8	397	11	8.2	2.8
Total	2,069	134	100.0	6.5

TABLE 3

MEASLES VACCINE EFFICACY
PLAINFIELD, CONNECTICUT
NOVEMBER - DECEMBER 1972

Vaccine Efficacy =	$\frac{\text{Expected-Observed x 100}}{\text{Expected}}$
Populations =	$\frac{\text{Unvaccinated rate-Vaccinated rate x 100}}{\text{Unvaccinated rate}}$
Measles Cases =	$\frac{27.0-1.1 \text{ x } 100}{27.0}$
Attack Rate =	95.9%

Discussion

Although an analysis of this outbreak (Table 2) clearly establishes that most of the measles infections occurred in unvaccinated children, 18 children with measles had been vaccinated. Several explanations are possible. First, contrary to current Public Health Service recommendations, 5 of these 18 children had been vaccinated at 3-10 months of age; one of these 5 and 3 other children received measles immune globulin at the time of vaccination. Second, storage and handling of vaccine after reconstitution may have been less than optimal, although we could not evaluate this for each child. Third, a 3-5% seroconversion failure rate may occur with administration of live attenuated measles virus vaccine. Excluding the 5 cases mentioned above, the other previously vaccinated children who had measles had been vaccinated at 1-9 years of age, and the interval between vaccination and onset of illness ranged from 1½ to 7½ years. It is possible that one or all of the above explanations played a role in these remaining "vaccine failures," but it is difficult to reach a conclusion with the available histories.

One of the primary objectives of this study was to assess the efficacy of measles vaccine in this outbreak. This was determined by applying the formula shown in Table 3 for measuring the effect of vaccine on the incidence of a given disease. "Expected" represents the attack rate for the unvaccinated group (27.0) and "observed" the rate for the unvaccinated group (1.1). If vaccinees were not protected by measles vaccine, one would expect their attack rate to be the same as that of unvaccinated susceptibles. This was not the case. Based on these data and calculations, measles vaccine was 95.9% effective in this outbreak.

Conclusions

No justification was found in this outbreak for doubting the efficacy of properly administered measles vaccine.

Continual emphasis must be placed on following the recommendations for the administration of measles vaccine.

Despite a high level of immunity (79.2%) in this population, measles spread within it in epidemic fashion, thus emphasizing that reliance upon a so-called herd immunity should not divert us from achieving a maximal immunization level within a community.

TABLE 2

MEASLES ATTACK RATES BY SCHOOL AND VACCINATION STATUS
PLAINFIELD, CONNECTICUT NOVEMBER - DECEMBER 1972

		Population Enrolled		*Measles Cases*		*Attack Rate*	
Grades	*Total*	*Vaccinated**	*Unvaccinated*	*Vaccinated**	*Unvaccinated*	*Vaccinated**	*Unvaccinated*
K-3	985	757	228	11	50	1.5	21.9
4-6	687	589	98	7	55	1.2	56.1
7-8	397	293	104	0	11	0.0	10.6
Total	2,069	1,639	430	18	116	1.1	27.0

*Includes children immune by history of measles infection prior to November 1972 (see text).

The President's Page

The first seeds of the idea of the Connecticut Ambulatory Care Study (CACS) were cast on barren rock about ten years ago by the Third Party Payment Committee of the CSMS, which was then under the leadership of the late Dr. Howard Ente. The emphasis at this time was on the cost analysis of the delivery of medical care via the vehicle of the office of the private practicing physician. After having spent considerable time and after having received much advice, we concluded that such a study was impractical at the time.

A few years later these same seeds were cast on more fertile soil in the Council of the Connecticut State Medical Society, and the present Planning Committee of the Connecticut State Medical Society was formed, one of its charges being to get together with CRMP and study the feasibility of initiating such a study concentrating on comparative quality and costs of the delivery of medical care in physicians offices, group practices (HMOs) and hospital out patient departments.

An Advisory Committee to the Planning Committee was formed, which included representatives from the CSMS, CRMP, Yale Medical School and the University of Connecticut School of Medicine. This Advisory Committee met monthly for almost a year outlying objectives and methods of study.

The final study was approved by the House of Delegates of the Connecticut State Medical Society at its annual meeting in 1972. A contract grant of $350,000 was obtained from HEW-RMP to finance the project, and Dr. Daniel Hamaty was obtained as Project Director.

The sub-council responsibility for the running of the project remained with the Planning Committee, and an Advisory Committee to the CACS was formed. This included representatives from the CSMS, CRMP and groups and hospitals participating in the study. Subsequently technical advisory committees were formed to develop instruments of study and to determine what facets of medical practice were to be studied.

The objectives were to study the quality and cost of the delivery of medical care in the offices of 200 physicians in the Hartford and New Haven areas, four group practices and eight hospitals.

It became apparent, however, as the first year went on that due to the political situation full funding for the second year might not be forthcoming. This indeed proved to be the case, and the study was cut back to 100 physicians, four hospitals and as many groups as we could get, which was one or two out of the four. Dr. Falk's group and the Grove Hill Clinic did not choose to cooperate. All eight hospitals did agree to participate, and the solicitation of physicians are doing well at this writing.

It also became apparent that an additional grant would be needed to carry out the cost aspects of the study. Ergo, $65,000 additional funds were requested, and we have reason to suspect that we shall get it.

This is one of the first studies of this kind to be done in the United States, and Connecticut can be proud of the work that is being done by the staff of this project and its advisors. Hopefully the report will be out in twelve months to 18 months.

James H. Root, Jr., M.D.
President

Reflections from the Dean's Office

Robert U. Massey, M.D.

In *The Hartford Courant* on Tuesday, June 4th, there were headlines in 30 point type: "U Conn Health Center Urged to Define Its Mission." The article, written by David Rhinelander following an interview with Dr. Cheves McC. Smythe, dean of the University of Texas Medical School at Houston, goes on to quote Dr. Smythe, "This institution should move toward the high risk world of action-reaction joyously—U Conn must decide what to be good at and then do it."

Cheves Smythe and I have no disagreement on this point, and he knows, as well as I, that it is easy —and important—to advise anyone in any enterprise to define his goals, and that it is equally difficult to settle on definitions which will satisfy even the barest majority of whomever requires to be satisfied. Goals, freefloating and shining in the empyrean heavens, are easily and joyously stated. They frequently defy definition and for that reason threaten no one. Hard real life objectives can be defined but are risky. Every time one is written down, there will most certainly be a barrage of critical comment and sometimes cries of outrage. Every stated objective is in defiance of someone's expectation.

In fact, the Health Center has defined its goals often and publicly.[1] [2] [3] The faculty and administration have declared a determination to be excellent—to excel, not in all things certainly, but in whatever is undertaken, to strive for excellence and not for mere adequacy. Further, the School of Medicine has not seen itself as primarily concerned with providing clinical services, or with education, or with research, but rather has been concerned to achieve a balance of all these three functions of a University: "the conservation, dissemination, and advancement of the collective knowledge of society."[4] In the case of a medical school, that collective knowledge has to do with all of science and art which relate to human health and human sickness.

But what about the really difficult decisions that have, in Dr. Smythe's words, "been ducked to date"? I shall try to list some of those which have not been ducked and then consider those that appear to be less explicit, that have in part been ducked.

Few of these statements are to be found in quite this form in any policy manual or outline of purpose. I believe, however, there would be a recognition by both faculty and students that the School has generally had these goals for admissions:

1. In the fall of 1975 the School of Medicine plans to admit eighty medical students to its eighth class. This number will remain stable for the time being, probably for five years. This is thirty-two more than the number planned and for which the faculty has been recruited.
2. About ninety percent of students in the School are and will continue to be Connecticut residents.
3. Students will be selected on the basis of their apparent intelligence, high motivation for service, and demonstrated ability to achieve difficult objectives. We shall continue to seek students who are "the brightest and best," who stand in the upper quarter of medical school applicants in the nation. Medical school is no place for a rehabilitation of the habits of a lifetime.
4. The School of Medicine's objective will be to recruit a student body whose numbers of men and women, minority and non-minority, reflect in general the ratio of those groups to one another in the general population.
5. Selection of the most worthy student in ten for admission is a difficult task. The School will strive by continuing evaluation of the admissions process and its outcome to select the best students. It is anticipated that every student selected will complete the medical school curriculum.
6. Students seeking admission to medical school do not know what kinds of physicians they will be. The admissions committee should attempt each year to admit a class heterogeneous with respect to academic and personal interests but homogeneous with respect to high intelligence, motivation toward service, and capacity for hard work.
7. No student will be denied admission on account of inability to pay for all or part of his professional education. Economic hindrances to academic success in medical school will be removed.

Next month I shall continue with statements of objectives relating to the educational programs, research, and clinical programs of the School.

ROBERT U. MASSEY, M.D., Dean and Professor of Medicine, University of Connecticut, School of Medicine, Farmington, Conn.

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Letters To The Editor

Letters to the Editor are welcomed and will be published, if found suitable, as space permits. Like other material submitted for publication, they must be typewritten *double spaced* (including references), must not exceed 1½ pages in length and will be subject to editing and possible abridgment.

ANTENATAL ASSESSMENT

To the Editor: Having read the case history submitted to *Connecticut Medicine* by the Perinatal Morbidity and Mortality Committee of the State of Connecticut, I feel obligated to comment on Dr. Rigney's critique. (Conn. Med. 38:251, 1974.)

Apparently, the Committee and Dr. Rigney feel that criticism of the attending obstetrician is in order. The Committee has concluded that " . . . adequate monitoring . . . probably would have resulted in an earlier delivery and enhance chances for survival." According to Dr. Rigney, adequate monitoring would have consisted of " . . . careful attention to the quality of preceding menses, uterine growth rate, time of appearance of fetal motion, and auscultable heart beat." He then states that if there is any question concerning the above " . . . ultrasonic biparietal diameter measurement should be performed, preferably before 32 weeks gestation . . ." Further, there is a recommendation that serial maternal urinary estriol values and amniocenteses be done. Frankly, the only valid recommendation I recognize in the entire critique is that of fetal monitoring during labor. It is challenging to investigate and rely upon a menstrual history in concluding that an infant will be at 40 weeks of gestation on a specific date. Further, I wonder how many physicians at around 32 weeks of gestation are suspicious that the pregnancy is indeed much later than 32 weeks and would then perform ultrasound biparietal diameter studies? In addition, at least to my knowledge, more than one or two estriol values are needed to make any adequate conclusion concerning their levels. Can one at 38 or 40 weeks begin doing serial estriol studies on every patient, while assuming that a majority of these will go beyond that date felt to be the limit of post maturity? The same comment may be made about amniocentesis.

To be sure, in any questionable labor, fetal monitoring is indicated. I place myself among the " . . . many obstetricians to recommend an increased rate of Cesarean section in primiparous breech patients." The statistics have remained the same over the years, namely, a breech presentation statistically significantly results in increased perinatal mortality and morbidity.

In conclusion, although the presented case and comments are educational, the latter are impractical in every day obstetric practice.

Leonard A. Greene, M.D.

Norwich, Conn.

The above letter was referred to the authors of the article in question who offer the following reply:

To the Editor: The Committee to Study Perinatal Morbidity and Mortality is grateful for Dr. Greene's response. His letter was turned over to Dr. Brian F. Rigney for comment which follows:

I am pleased to respond to Dr. Greene's letter and amplify some apparently misunderstood portions of the article. No patient is post-dated until she becomes 41½ to 42 weeks of normal gestational age. The recommendations for careful menstrual history, assessment of uterine growth, etcetera, are directed to dating the gestational length of pregnancy by clinical or laboratory means. By these, when the post date period is reached, we have excluded the post pill patients, oligo ovulators or others who do not really have gestationally prolonged pregnancies, but have inaccurately dated pregnancies. It is still valid for obstetricians to cultivate the clinical ability to assess the continued normal growth pattern of a pregnancy by the uterine size. We do use this tool to indicate potential multiple births, intrauterine growth retardation, polyhydramnious, or regression of uterine size from intrauterine death.

Ultrasound becomes a more accurate tool in pinpointing gestational age when discrepancy from uterine growth rates or menstrual history is present. With this tool, the period between 20 and 32 weeks has the greatest degree of accuracy.

If the gestational accuracy has been confirmed (if necessary by all of these techniques), then at 41½ to 42 weeks of normal gestational length, we know that the patient is at increased risk of both intrauterine demise or intrapartum death. It is not sufficient to only monitor the infant by fetal E.K.G. in labor because of this increased risk of fetal death in utero. Also, infants who have true post-mature syndrome suffer increased morbidity and mortality within the first two years of life compared with normals, and it is provoking for us to be able to perhaps reduce this loss by intervening in the unfavorable pregnancy and delivery when we have any laboratory tests that accurately show us that the post-mature period has been entered whether labor is imminent or not.

Onset of a testing sequence with amniocentesis or amnioscopy, estriol or serial HPL values (if they are proven reliable in ongoing studies) does not begin at the 38 to 40 week time period. This obviously would be too much of a shotgun approach and too expensive and time consuming to be reasonable.

When the patient has reached the 41½ to 42 week gestational mark, however, she is at increased risk and it is appropriate to begin testing. A curve of estriol values (or serial HPL) may be obtained with three values collected in 4 days. (Values on days 1, 2, and 4). The number of patients sampled by this management will probably be in the range of 6% of a normal distribution of patients. It is hoped, of course, that reliable low cost kit tests for HPI will prove to be a useable tool in assessing post-maturity.

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Clinical Director

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The Hospital of St. Raphael

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Chronic Hemodialysis Programs in Connecticut

(Second of two parts)

Thomas J. Stranova, M.P.H., David A. Pearson, Ph.D., John D. Thompson, M.S.P.H. and Samuel B. Webb, Jr., Dr. P.H.

I. Introduction and Objectives

Within the past few years, national attention has been drawn to end-stage renal disease and kidney dialysis programs. A major contributing factor to this increased attention is the recognition that kidney-related diseases are the second highest cause of work loss in the nation. Kidney disease ranks fourth as the major cause of death in the United States, and it is generally held that an estimated three million Americans have unrecognized and undiagnosed kidney disease.

The above factors, plus general interest in studying chronic hemodialysis services in Connecticut, stimulated a project concerned with characterizing the patient population using hemodialysis and describing the programs which provide such services. Information which describes the patient population in Connecticut from 1966 through 2972 was presented in an earlier publication.[1] The objective of this paper is to describe and analyze the structural and operational features of end-stage kidney disease services in Connecticut.

II. Methodology

The time period covered by this study approaches seven years, from January 1966 through November 1972. Data were obtained through the use of a mailed survey questionnaire, from interviews with professional and administrative staffs and on-site observation of therapy units.

The survey questionnaire provided a general profile of each health care facility with operational kidney disease treatment capability. Information from the questionnaire also identified facilities having artificial kidney machines but not providing hemodialysis therapy. Additional information was obtained concerning expansion activities and establishment of new chronic kidney disease services.

III. Findings

History and Geographical Distribution of Programs

Hemodialysis programs in Connecticut developed principally from early activities with acute hemodialysis at Yale-New Haven Medical Center in the late 1950s. The first chronic hemodialysis program in Connecticut was initiated by the Veterans Administration Hospital (West Haven) in 1966. The following year, programs were started at Yale-New Haven Medical Center and at Hartford Hospital. As of January 1973, there were 12 chronic hemodialysis programs in the state; during 1973, two additional programs were initiated at Backus Hospital and Johnson Memorial Hospital, and the Veterans Administration Hospital in Newington expects to have an operational program by July 1974. These new programs are included in figure 1, but are excluded from other tabular and text material due to the newness of their operation.

Figure 1 shows the geographical distribution of existing programs by hospital service area (HSA), and identifies the available therapy and treatment modalities. Except for the Waterbury and Danbury areas, the distribution follows a corridor beginning in the "pan-handle" region of the southwest and passing through the Bridgeport, New Haven and Hartford regions encompassing the major industrial and populated areas in the state.

Table 1 shows the growth of chronic hemodialysis services in the State from January 1966 through November 1972. With the exception of one 56 bed nursing home, all chronic hemodialysis programs are located in acute general hospitals approved by the American Medical Association for internship and residency programs; at the time this study was conducted, 64 percent of the hospitals had medical school affiliations.

Figure 2 presents information showing the number of new treatment units per year in relation to the number of new patients entering chronic hemodialysis programs in Connecticut. These patients include new cases of end-stage kidney disease plus

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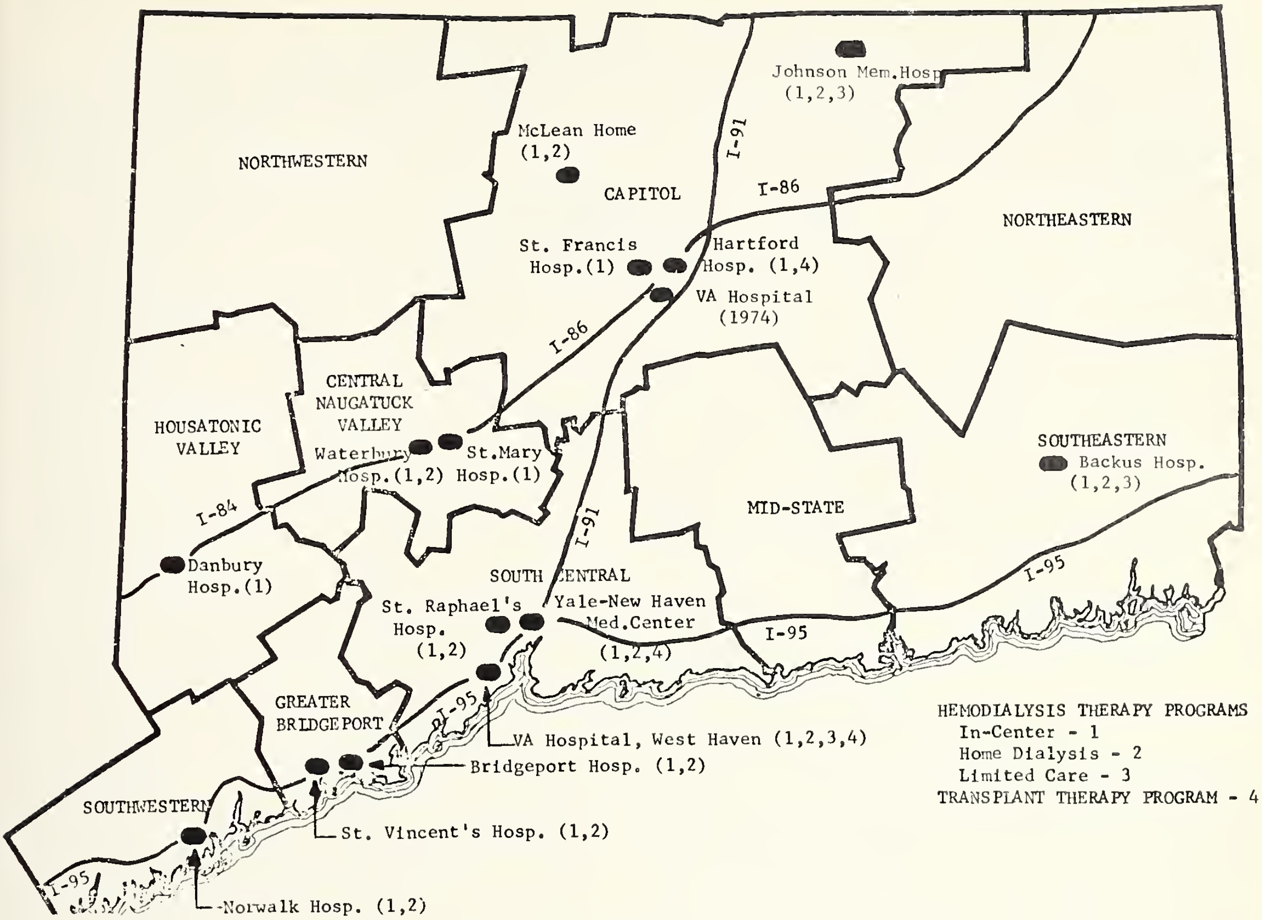

Figure 1
Distribution of End-Stage Kidney Disease Services by Therapy and Hospital Service Area — Connecticut 1972

TABLE 1

GROWTH OF CHRONIC HEMODIALYSIS PROGRAMS IN CONNECTICUT

	Annual Number of Treatment Units						
Program	*1966*	*1967*	*1968*	*1969*	*1970*	*1971*	*1972*
Total	1	8	14	23	35	41	64
VA Hospital-West Haven	1	4	9	9	11	11	14
Hartford Hospital	-	1	1	2	4	6	10[1]
Bridgeport Hospital	-	-	-	-	4	4	7
Danbury Hospital	-	-	-	2	3	4	5
St. Vincent's Hospital	-	-	-	4	4	5	5
Yale-New Haven Hospital	-	3	4	4	4	4	4
Norwalk Hospital	-	-	-	-	-	-	4
St. Francis' Hospital	-	-	-	-	-	-	4
Waterbury Hospital	-	-	-	2	3	3	3
St. Raphael's Hospital	-	-	-	-	2	2	3
St. Mary's Hospital	-	-	-	-	-	-	3
McLean Home	-	-	-	-	-	2	2

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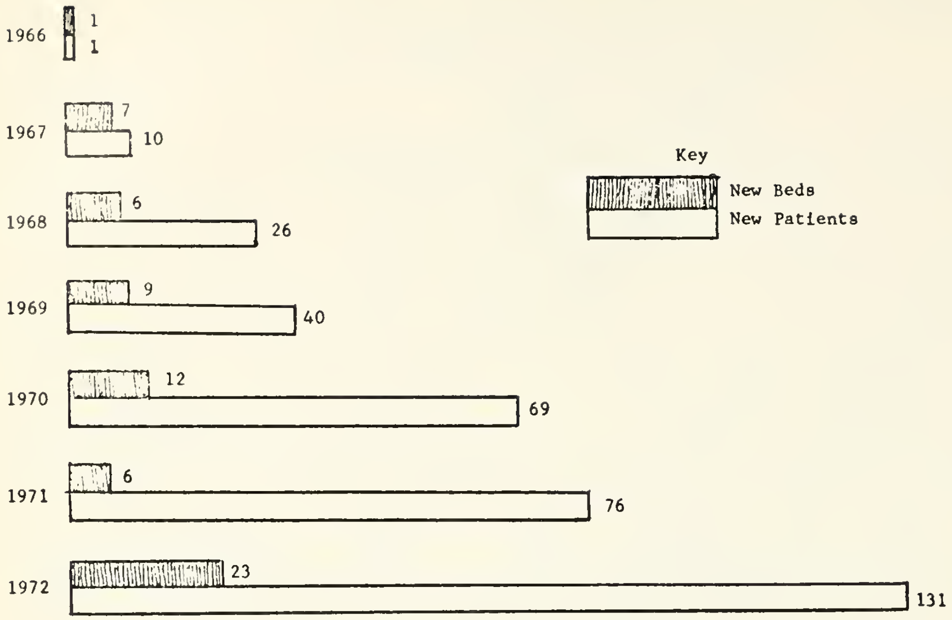
[1] Includes 2 reclining lounge chairs used in addition to 8 hospital beds.



BEDS Cum. Freq.	PATIENTS Cum. Freq.
1	1
8	11
14	37
23	77
35	146
41	222
64	353

Figure 2
Annual Addition of New Chronic Hemodialysis Treatment Units and Patients. Connecticut — January 1, 1966-November 30, 1972.

those who may have been on chronic peritoneal dialysis or transferred from programs outside Connecticut. The number of treatment units expanded from one in 1966 to 64 in 1972. Over one half of the existing treatment units have been placed in operation since 1970. Although Figure 2 shows 64 available treatment units as of 1972, there is an equivalent of 78 single-patient kidney machines when centralized dialysis systems and machines which dialyze more than one patient at a time are included.

Table 2 reveals that of the 64 available treatment units, about one-third are located in the South Central Hospital Service Area (HSA); one-fourth are located in the Capitol HSA, although they had the greatest number of patients. Hartford Hospital shows the largest number of patients (51 or about one-fourth of the total), whereas the Veterans Administration Hospital in West Haven had the largest number (14) of beds. The number of treatment units for the state as a whole was 2.1 per 100,000 population. Four of the HSAs exceeded the state average (Greater Bridgeport, South Central, Housatonic Valley, and Central Naugatuck); two HSA's (Capitol and Southwestern) were below the state average.

Until 1970, the chronic hemodialysis programs in Connecticut used only in-center dialysis as a treatment modality. By the end of that year, there were five home dialysis training programs in the state; at the end of 1972, this number had increased to eight, and other facilities are planning to add such programs. At the end of 1972, the McLean Home had trained the largest number (11) of patients for home dialysis; Hartford Hospital refers many of their patients to the McLean Home for such training.

Table 3 presents information concerning patient residence and the geographical location where service is received. About 90 percent of the patients receiving chronic hemodialysis therapy resided in HSAs with treatment programs; four HSAs had no treatment facilities at the time the study was conducted. Of the six HSA's with facilities, three (Greater Bridgeport, South Central and Capitol) provided service to a greater percentage of patients than the percentage residing in that area. A case in point is the Greater Bridgeport HSA which had 15.3 percent of all patients residing in that area, but 2.3 percent received care at facilities located in that region.

Operational Characteristics

A summary of the operational characteristics of chronic hemodialysis programs is presented in Table 4. Hours of operation range from 42-112 hours per week. The average number of dialysis treatments per patient per week ranged from 2-3. The number of actual hours per dialysis treatment ranged from 5 to 10 with the mode being 6 hours. In addition to the actual number of hours per dialysis, there is an estimated one hour required to connect and disconnect the patient to and from the machines.

Utilizing these operational characteristics, the theoretical treatment capacity per week of patients

TABLE 2

NUMBER AND PERCENTAGE DISTRIBUTION TREATMENT UNITS AND PATIENTS BEING SERVICED, AND TREATMENT UNITS PER 100,000 POPULATION BY HOSPITAL SERVICE AREA[1] AND PROGRAM, NOVEMBER 30, 1972

Hospital Service Area and Program	*Treatment Units*		*Patients*		*Treatment Units per 100,000 Population (1970)*
	Number	*Percent*	*Number*	*Percent*	
TOTAL—Connecticut	64	100.0	212	100.0	2.1
Capitol HSA	16	25.0	69	32.5	1.8
Hartford Hospital	10[2]	15.6	51	24.1	—
St. Francis' Hospital	4	6.2	9	4.2	—
McLean Home	2	3.1	9	4.2	—
South Central HSA	21	32.8	58	27.4	3.6
VA Hospital-West Haven	14	21.9	29	13.7	—
Yale-New Haven Hospital	4	6.2	22	10.4	—
St. Raphael Hospital	3	4.7	7	3.3	—
Greater Bridgeport HSA	12	18.7	49	23.1	3.8
Bridgeport Hospital	7	10.9	28	13.2	—
St. Vincent Hospital	5	7.8	21	9.9	—
Central Naugatuck Valley HSA	6	9.4	15	7.1	2.7
Waterbury Hospital	3	4.7	11	5.2	—
St. Mary's Hospital	3	4.7	4	1.9	—
Housatonic Valley HSA	5	7.8	13	6.1	3.5
Danbury Hospital	5	7.8	13	6.1	—
Southwest HSA	4	6.2	8	3.8	1.2
Norwalk Hospital	4	6.2	8	3.8	—

[1] As identified by the State Department of Health.

[2] Includes 2 reclining lounge chairs used in addition to 8 hospital beds.

Note: Percentages may not total due to rounding.

TABLE 3

NUMBER AND PERCENTAGE DISTRIBUTION OF PATIENTS BY RESIDENCE AND LOCATION OF WHERE CARE WAS RECEIVED BY HOSPITAL SERVICE AREA, NOVEMBER 30, 1972

Hospital Service Area[1]	*Patients Residing in Hospital Service Area*		*Patients Obtaining Service in Hospital Service Area*	
	Number	*Percent*	*Number*	*Percent*
All Areas	209[2]	100.0	212[3]	100.0
Greater Bridgeport	32	15.3	49	23.1
Housatonic Valley	13	6.2	13	6.1
South Central Conn. Valley	49	23.4	58	27.4
Central Naugatuck Valley	15	7.2	15	7.1
Capitol	60	28.7	69	32.5
Southwestern	16	7.7	8	3.8
Southeastern	14	6.7	—	—
Mid-state Conn. River Estuary	5	2.4	—	—
Windham-Northeastern	4	1.9	—	—
Litchfield Hills-Northwestern	1	0.5	—	—

[1] As identified by the State Department of Health.

[2] Connecticut residents.

[3] Includes 3 patients not residing in Connecticut

TALBE 4
SUMMARY OF OPERATIONAL CHARACTERISTICS
OF CHRONIC HEMODIALYSIS PROGRAMS IN CONNECTICUT, NOVEMBER 30, 1972

Program	*Average No. Hours/ Week Unit Operates*	*Average No. Dialysis Treatments/ Patient/ Week*	*Average No. Hrs./ Dialysis Treatment*	*Average No. Dialysis Treatments Per Hour*[1]
Bridgeport Hospital	88	3	6	0.143
Danbury Hospital	45(42-48)[2]	2.5(2-3)[2]	6	0.143
Hartford Hospital	112	2	6	0.143
Norwalk Hospital	40	2	6	0.143
St. Francis' Hospital	70	2.5(2-3)[2]	6	0.143
St. Mary's Hospital	54	3	6	0.143
St. Vincent Hospital	80	2	6	0.143
St. Raphael Hospital	40[3]	2	6	0.143
Waterbury Hospital	69	3	5	0.167
Yale-New Haven Hospital	72(64-80)[2]	2.5(2-3)[2]	6	0.143
VA Hospital-West Haven	66	2	10	0.091
McLean Home	45(42-48)[2]	2.5(2-3)[2]	6	0.143

[1] Average number of treatments =1 (hour)÷(A+B)
Per Hour
A = Average number of hours per dialysis treatment.
B = Average time required to begin dialysis and take the patient off the artificial kidney is estimated at one hour. Operational down-time due to servicing dialysis machines is not included in the average number of treatments per hour estimate. The newness of the dialysis hardware has not generated sufficient down-time experience to include in the above estimate. However, 42% of the programs have back-up dialysis capability in case of machine problems, and/or perform maintenance and repair outside the scheduled treatment periods.

[2] These hospitals reported a range of hours the unit operates because some patients are dialyzed twice and others three times per week depending on their needs.

[3] The actual number of hours per week hemodialysis treatments are provided is understated because home training is carried out as a second shift.

for each program was determined. These theoretical estimates were found to correspond in most cases, to the patient treatment capacity per week provided by the programs. When the theoretical estimates and the estimates concerning treatment capacity per week, which were obtained from the programs, were compared against the number of patients dialyzed per week, it was found that the average percentage level of treatment services utilized in the state ranged from 66-84 percent.

Personnel and Educational Activities

Among the physicians responsible for program operation, 58 percent were full-time hospital staff; the majority were certified in internal medicine. Specialty training of the physicians in nephrology varies from clinical exposure to experience gained as a renal fellow or resident. Registered nurses and technicians usually were trained on the job. Except for a formal training program for hemodialysis technicians at Bridgeport Hospital, most educational activities for nurses and technicians were carried out through in-service training programs. At several of the hospitals, I.V. therapy nurses are cross-trained as dialysis nurses to permit effective utilization of manpower.

As for educational activities, the hospital conducted teaching rounds and seminars on the management of end-stage kidney disease. An active forum exists through the Medical Advisory Board of Connecticut Kidney Foundation, Inc. whereby nephrologists can exchange information. For other professional and technical personnel, continuing education is accomplished mostly through in-service programs and attendance at seminars and professional meetings, including those held by the Connecticut Chapter of the American Association of Nephrology Nurses and Technicians. Other educational activities are directed at visiting nurses and are associated with problems of home dialysis. Ambulance and emergency room personnel are also acquainted through educational efforts with emergency situations (e.g., air embolisms with patients who dialyze at home).

Economics

The charges per dialysis treatment among the programs studied ranged between $90 and $158; the annual patient charge for in-center dialysis may vary from $14,000 to $25,000. The average charge per dialysis in the state was $120 or $20,000 per year. These charges exclude those laboratory, X-ray, medication and other support costs resulting from medical complications.

In terms of the cost to the hospital for providing hemodialysis services, two-thirds of the costs are direct operating expenses. It was estimated that the cost to the hospital for each dialysis treatment could be expected to range between $100 and $130.

Transplant Centers

At the time this study was undertaken, there were two transplant centers in the state. The largest is the Yale-New Haven/VA Hospital - West Haven program, and the second is located at Hartford Hospital. Ninety-three kidney transplants were performed at these centers; 84 by the Yale-VA program and 9 by the Hartford Hospital program. As of January 1973, there were 29 patients on the Yale-VA Hospital program candidate list and 20 patients on the Hartford Hospital list. This represents approximately 23 percent of the patients who were receiving chronic hemodialysis therapy at the time of this study. The rest of the patient population was either unsuited for transplantation or did not elect it.

IV. Discussion

Since patients usually require dialysis three times a week, convenient geographical accessibility of services has a significant impact on the patient and his family. Geographical inaccessibility can adversely effect the quality of rehabilatative attainment. Lost time and the physical-emotional stresses of continued commuting to treatment centers may limit employment opportunities and incentives, and also create social and financial hardship for patient and family. This situation is further aggravated as the patient must adjust to the hospital schedule which may create a rigidity resulting in a lesser degree of rehabilitation and a reduced capability for earning a living.

In terms of expansion of services, the study obtained information that most programs are expecting to increase operating hours and personnel as opposed to acquiring more space and additional kidney machines. The new program which opened in 1973 at Backus Hospital in Norwich will provide care in a geographical area which previously did not have chronic hemodialysis capabilities. Similarly, the new program at Johnson-Memorial Hospital in Stafford Springs should also assist patients in that area. It would be well to gather patient origin data from these new programs and from the Veterans Administration Hospital in Newington once it opens its program. The data should be compared with similar data from this and the previous study[1] to determine what change, if any, was made by the introduction of these new programs. Of particular interest would be any change in the relationship between where patients live and where they receive care.

Planners and others concerned with this subject must also recognize that the objectives of the various programs vary. For example, at the time of this study program objectives at Yale-New Haven were oriented toward pre and post-operative dialysis support to the hospital's transplant therapy program and to the provision of home dialysis training. The program at the Hospital of St. Raphael's accepted primarily patients who elect transplant therapy and home dialysis. The Veterans Administration Hospital in West Haven is legally mandated to provide care only to eligible veterans. Of the 49 patients residing in the South Central HSA, 13 were eligible for treatment at the Veterans Administration Hospital. Among the remaining 36 patients, 43 percent were dialyzed outside the HSA; 37 percent were serviced by the Bridgeport and St. Vincent hospitals. If this pattern continues, it is reasonable to assume that the Bridgeport HSA will surpass the South Central HSA in terms of the volume of patients serviced. In light of these findings it may be well to consider the following potential alternatives: (1) the two community hospital programs in the South Central HSA might consider redefining their service parameters; (2) establishment and expansion of community sponsored limited-care programs; (3) establishment of sharing agreements with the West Haven Veterans Administration Hospital.

Considering new cases with end-stage renal disease, discussions with professional staff revealed that those who have been on chronic peritoneal dialysis and those who transferred from programs outside of Connecticut, contribute less than 10 percent of the new patients each year. Analysis of the comparative growth of treatment units and new patients suggests that the identification of new end-stage renal patients suitable for chronic hemodialysis may be a function of the availability of treatment units.

There was the equivalent of 78 kidney machines in the state at the time of this study, and 69 were actively used. Discrepancy between the number of available beds and machines utilized can be explained in that several programs may use machines exclusively for home dialysis training; when the bed has a non-training patient scheduled, a different machine is used. Given ideal circumstances in terms of beds, scheduling, etc., 69 patients would dialyze at one time on a given eight-hour shift of personnel (i.e. 78 minus 9 back-up machines). Considering, however, such factors as scheduling problems, machine down-time, hours of operation, staffing problems, etc. all beds are never fully utilized. Although formalized study is required to make a precise judgement, discussions with professional staff in the programs revealed that an estimated average of 20 percent of the beds in the state are not utilized during a given shift operation.

Until 1970 the chronic hemodialysis programs in Connecticut utilized only in-center dialysis. By the end of that year there were five home dialysis training programs in the state. As of December 1972, eight units were providing home dialysis training. At that time, six of the eight facilities were planning to expand their training activities, and three other existing programs expected to add home training to their programs. Most of the existing chronic hemodialysis programs, therefore, expect to provide such training.

Limited care dialysis is a relatively new concept which is also referred to as self-care or satellite-care dialysis. The literature has shown such care to be more economical than in-center care and, if located in areas that provide easy accessibility plus flexibility in treatment schedules, it has the potential to be conducive to fuller rehabilitation of the patient to his previous level of activity and role in the community.

The high cost of dialysis is not only catastrophic for the patient but substantially affects the hospital's financial posture. Therefore, it follows that further expansion of existing, or the establishment of new programs must be evaluated in terms of area-wide needs. The decision to invest expensive resources and personnel in this activity should be predicated on planning that ensures both efficiency and effectiveness.

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This is the second of a series of two articles. End of Part II

The authors wish especially to acknowledge the cooperation of the Kidney Foundation of Connecticut, and the numerous persons from various health care facilities and agencies in the state who gave their time and effort to this project.

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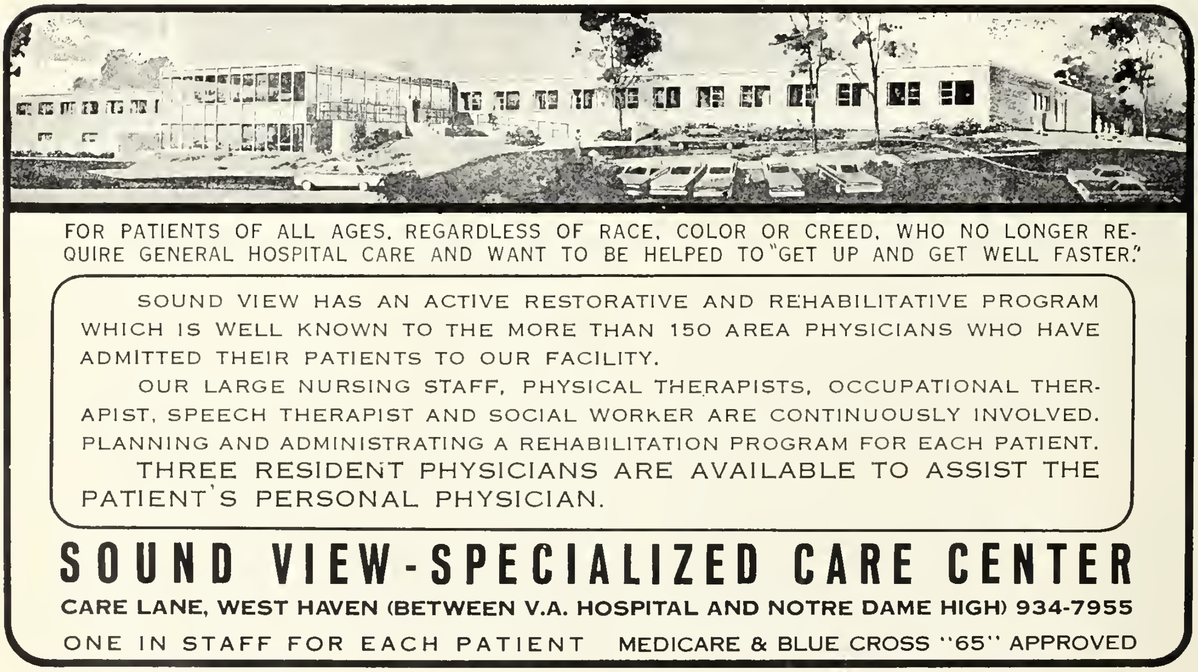

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Laboratory Confirmation of Multiple Sclerosis on a Drop of Cerebrospinal Fluid*

Patrick F. Bray, M.D., J. Joseph Perry, B.A., Theodore N. Hackett, B.S., Hamp Greene, M.D., and Leonard W. Jarcho, M.D., Salt Lake City

ABSTRACT — The detection of an elevated immunoglobulin G concentration in cerebrospinal fluid offers the only useful laboratory test for the presumptive diagnosis of multiple sclerosis. A recently developed method[1] using electroimmunodiffusion provides a reliable way of getting the answer on a single drop of cerebrospinal fluid. When abnormal values are found, the clinician must consider a few uncommon central nervous system (CNS) infections, including syphilis, as well as the "false positive" results encountered in patients with a reversal of their blood albumin globulin ratio (A/G). Results cannot be interpreted accurately if the spinal tap is "bloody."

Multiple sclerosis (MS) is a relatively common disorder of the nervous system. It occurs most often in young adults. The variability in its clinical appearance and the frequency with which it mimics other neurological and neurosurgical conditions make accurate diagnosis both important, and at times, difficult. Although the etiology of this demyelinating disease is still unknown, it has become a well established fact that the proportion of the immunoglobulin G (IgG) to total protein or albumin in the cerebrospinal fluid (CSF) is elevated in two-thirds to three-fourths of cases.[2] [3] It is also generally accepted that the elevated levels of IgG correlate clinically only with the severity of the disease and not with the age of the patient, the type of disability, or the duration of the disease. Certain other conditions, including CNS syphilis, subacute sclerosing panencephalitis and some forms of chronic meningitis, may cause elevated concentrations of CSF gamma globulin and hence must be considered in the differential diagnosis of elevated CSF gamma globulin.

This paper is intended to remind physicians that a method is now available for the rapid estimation of gamma globulin on a single drop of unconcentrated CSF, providing the only useful laboratory test for the diagnosis of multiple sclerosis. To demonstrate the validity and reliability of the technic, we are summarizing the results of 302 determinations on CSF from patients with a wide variety of disease conditions.

Materials and Methods

A total of 302 determinations were made on a miscellaneous group of patients at the University of Utah Medical Center, most of whom were studied on the Neurology Service.[4] All studies were done blind, i.e. without the technician having any clinical information. We wanted to determine (1) the per cent of patients with the clinical diagnosis of multiple sclerosis who had an elevated CSF IgG/albumin ratio, and (2) the number of patients without a clinical diagnosis of MS in whom an elevated ratio was found (i.e. presumed false positives).

The method used was modified only slightly from that of Tourtellotte et al.[1] It employs the technic of electroimmunodiffusion.

Results

Three hundred and two samples of CSF were analyzed and compared to normal values for CSF IgG/albumin (Table 1). The mean normal value is 15 per cent and the upper limit of normal (i.e. mean + 2 S.D.) is 27 per cent. Clinical diagnosis of MS had been made in 46 patients, 34 of whom (or 74 per cent) had elevated ratios of IgG to albumin. Thirteen patients without a clinical diagnosis of MS had elevated amounts of gamma globulin in their CSF, 10 of which elevations could be explained on the basis of reversal of serum albumin-globulin ratio, the result in most cases of chronic infection or liver disease. Three patients with high relative concentrations of IgG in the

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**Adapted by Dr. Bray from a paper published in the Rocky Mountain Medical Journal, Vol. 70, No. 7, July 1973.*

TABLE 1

TABULATED BREAKDOWN OF CLINICAL DIAGNOSIS COMPARED TO ELEVATED AND NORMAL LEVELS OF GAMMA GLOBULIN (IgG/alb.)

Total number of patients studied	302
Patients with elevated CSF IgG/albumin	47
Clinical diagnosis of MS	34
Reversal of serum A/G*	10
False positives (see below)**	3
False negatives (clinical diagnosis of MS with normal CSF IgG/alb.)	12
Per cent of clinical diagnosis of MS with elevated CSF IgG/albumin	74%

* Any serum A/G less than 1.0.

** 1 patient with sarcoidosis. 1 patient with transverse myelopathy, and 1 patient with seizures, unknown etiology.

CSF were encountered, one with the diagnosis of sarcoidosis, one with transverse myelopathy, and one with seizures of unknown etiology. These three cases might be considered "false positives." The range of CSF IgG/albumin ratios are shown as a graph in Figure 1, and the data are explained in the caption.

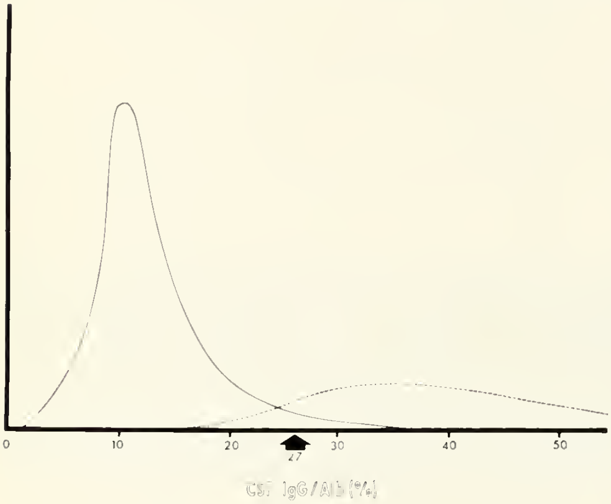

Figure 1

The solid curve indicates "hospital" controls without clinical signs of M.S. and the interrupted curve indicates patients with M.S. The arrow at 27% represents our upper limits of normal (i.e., two standard deviations above the control mean value). The control patients whose values fall above 27% are discussed under the text under "false positives."

Discussion

The results of our survey convince us that this test, which can be carried out in about six hours, is a reliable way of confirming the clinical diagnosis of MS in about three-fourths of patients. These results coincide very closely with those of earlier studies.[2,3] We have found the test especially helpful in patients in whom a surgical intraspinal lesion is suspected, since the observation may then be valuable in the management of a puzzling diagnostic problem.

As is usual with laboratory tests, this one is not one hundred per cent specific. Hence other disease conditions which produce abnormally high values must be considered in the differential diagnosis. Also when an elevated ratio is encountered, one should always look at the blood A/G ratio because it is well known that the CSF is esentially an ultrafiltrate of the serum. Blood in the CSF specimen and marked elevations of total CSF protein will complicate both the technic and the interpretation of the results.

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Issues in the Regionalization of Health Services

John R. Hogness, M.D.

Interest in the organization of medical and health services on a regional level has grown in recent years with the recognition of serious deficits in professional personnel and facilities in certain parts of the country. With the introduction of national health insurance, the need for more coordinated planning efforts will certainly grow more acute. There should be a national consensus on steps to be taken to enable a more equitable distribution of manpower and other health resources as universal coverage for the financing of medical services becomes law.

It would perhaps be helpful to define the meaning of regionalization as applied to the health care field. Before attempting a definition, I would like to indicate ways in which health services in the United States differ from other kinds of public services. Here are some of the features:

—Health service institutions are predominantly private, and most operate on a non-profit basis;

—There is no focal point of management responsibility for the provision of essential services to a population;

—The pattern of utilization of facilities and services is determined to a large extent by the decisions of individual professionals;

—Services are to a large measure "crisis"-oriented;

—The complexity of modern medical care leads to a high degree of specialization of function;

—The need within the population for various services differs greatly; therefore for some specialized services a very large population base is required to generate a sufficient workload;

—Health services are predominantly financed on a cost-reimbursement basis; for most institutions this means that there is no real budget.

These characteristics of our health care system place important constraints on attempts to solve problems of access, quality, and efficiency in medical services. Regionalization has been advocated as a means of removing some of these constraints. In health care terms, the concept of regionalization is usually defined as an organized set of relationships among service institutions on a regional scale. The functions of each institution are ordered in such a way that frequently used services are convenient to the consumer while specialized services are centralized to insure full utilization. According to this traditional concept, the hub of an integrated system would be the university teaching hospital, the center of specialized knowledge. Regional or district hospitals at specified geographic locations would offer a wide range of clinical services and would draw upon the university center only when confronted with problems of unusual complexity. The community hospitals in such a system would provide only routine care and would maintain close ties with physicians providing primary care in the community.

Stated in the abstract, this traditional concept is not consistent with the way health services are delivered in this country, nor with the methods by which they are financed and regulated. In reality, the particular features of a health system greatly affect the way regionalization is accomplished. Several years ago, a book was published in Sweden describing the approaches used to regionalize hospitals in a number of developed countries.[1] Each chapter was written by an expert from one of the countries mentioned. The striking thing about the book was its revelation of the degree to which the approach to regionalization is determined by the nature of the political and social system rather than by principles of medical care organization. For example, in Sweden a regionalized system operates very much as I described earlier. Each region functions with considerable autonomy, in accordance with political prerogatives of the county structure in Sweden. Decision-making in England, by contrast, is far more centralized through the National Health Service. Yet that service has maintained the sharp distinction between hospital care and primary care that has always characterized English medicine, at least until recently.

In the United States, regionalization is not highly developed: each medical institution has almost complete autonomy. As we discuss regionalization in the American context, we are immediately drawn

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into considerations of public accountability, of the financing of health services, organization of health care providers, and the management potential in the health industry. As I have indicated, all of these issues are deeply rooted in the nature of the American health care process. I believe that in order to cope adequately with the peculiarities of our system, we must evolve a concept of regionalization that is far less facility-oriented. I believe that the American contribution to regionalization may lie in developing an approach based more on function than on characteristics of institutions.

Past Attempts at Regional Planning

While experiments in coordinated planning have been limited in scope, some valuable experience has been gained.

The beginnings of regionalization in this country occurred during the 1930s—at a time when there was concern about the lack of hospital facilities, especially in rural areas. Regionalization was viewed as the means of bringing about the integration and coordination of hospital services so that the needs of an entire region could be met. Referral arrangements were worked out so that patients in rural areas could gain access to specialized services, and communication links were formed to larger medical centers to bring the latest information to bear on the regular care of local residents. These steps were taken on a small scale with support from a few leading foundations, notably The Commonwealth Fund, the W. K. Kellogg Foundation, and the Duke Endowment. The Bingham Associates Fund sponsored a pioneering venture in Maine. A plan was established linking the large hospital in Portland, Maine, to some 20 rural hospitals and incorporating an affiliation with the Tufts Medical School in Boston.

While developments such as this were occurring under private sponsorship during the thirties, the United States Public Health Service was actively promoting its own plan for regionalizing hospital facilities. This plan, which evolved from the work of Dr. Joseph Mountin of the Surgeon General's Office, envisioned four categories of hospitals: 1) the central hospital affiliated with a medical school, 2) a district general hospital, 3) a rural hospital of approximately 50 beds, and 4) a rural health center which coordinated ambulatory care, public health services, and very limited hospital services. The scheme was thereafter endorsed by the Commission on Hospital Care, which issued a report just after World War II. This Commission was created at the instigation of the American Hospital Association and was financed by a group of foundations. Its work entailed close cooperation from the Public Health Service, and included a series of state studies. The survey report on Michigan, where a pilot study was undertaken, contains a classic plan for an integrated hospital system covering that entire state.

While this Commission was still deliberating, legislation was introduced that was to launch the Federal government on its first extensive participation in the planning of health care services for communities across the nation. That legislation, popularly known as the Hill-Burton Program, has now been declared a success and thus, according to presidential thinking, is no longer needed. It is true that the program accomplished its primary purpose—to facilitate the acquisition of additional hospital beds, especially in rural areas. But that is only part of the story. The concept of regionalization embodied in the Commission's report was part of the background for the Hill-Burton Program. The farsighted planners at both Federal and local levels viewed that program as a means of encouraging regionalized planning of hospital services throughout the country. Nearly everyone would agree that this aspect of the program did not succeed, even though there was considerable mention of the matter in the original plans of most state Hill-Burton agencies.

For almost twenty years, the Hill-Burton Program was the sole instrument for promoting regionalization. In 1965, the President proposed and the Congress passed a bill creating the Regional Medical Programs to combat heart disease, cancer, and stroke. The intent, here, was to close the gap between the development of new knowledge concerning heart disease, cancer, and stroke, and the application of that knowledge in the care of the patient. To accomplish this goal, a series of grants were to be made to plan and establish cooperative mechanisms involving the health resources of various regions. The programs were to be organized by broadly representative groups. Rather than determining the regions in advance, the government asked local groups to propose regions, calling attention to the functional relations among institutions necessary to accomplish the purposes of the Program. Fifty-six regional programs emerged. Many were based essentially on state lines: others took in combinations of entire states, portions of several states, or a portion of a state around a metropolitan center. The programs are completely voluntary in nature, the only incentive being the provision of Federal funds to support approved activities proposed by the regional agent.

Given the broad wording of the Act, it is not surprising that a wide variety of organizational structures and activities were produced. In fact, the diversity is so great that one is hard pressed to describe a typical RMP. The lack of general uniformity, moreover, has made it difficult to assess the progress of the Program as a whole. Since the programs also by-passed jurisdiction by state and local government, they have not prospered in this era of the new federalism. There is much discussion of regionalization in the legislative record, but I think it fair to say that Regional Medical Programs never had the authority necessary to develop more formal patterns of regionalization among health care providers, nor did many of the programs give regionalization a high priority. RMP is essentially a gentle and persuasive tool, and at a time of public outcry for the reform of the health care system, such a gradual approach, emphasizing cooperation, education, and behavior change has little chance of responding adequately.

Emergence as a Policy Concern

If the early attempts at regionalization have been so uncertain in their effects, why is the matter coming to the fore at this time in national planning? I believe it is because Americans are once again recognizing the relevance of regionalization to the important policy concerns of the day, especially if one considers regionalization to be more than just a set of planned relationships among hospitals.

One example of a reawakening of interest is found in the recent report of the Committee for Economic Development entitled, "Building a National Heart Care System."[2] The report recommends establishment of regional health service agencies. These agencies would replace the current health planning agencies, and would be given substantial powers to bring together both the financing and delivery functions of health care. The resources generated by a national health insurance program would be used to plan and foster improvements in the delivery system.

In advocating wide-ranging powers for a regional health agency, the CED cites the precedent of Federal action in the areas of housing, highway and airport construction, mass transit, and so forth. I leave it to others to decide whether experiences in these areas have much meaning for the health field. I do believe that the task of improving the quality, efficiency, and distribution of health services will require the kind of social action that this country has not heretofore been able to rally except on a community level.

In December, 1973, federal legislation was introduced by Congressmen Paul Rogers, James Hastings, and William Roy.[3] Following some of the concepts in the CED report, this legislation would authorize federal support for the establishment of "Health Service Agencies." These agencies would be non-profit corporations responsible for the planning and development of health care in areas (or regions) designated by the Secretary of Health, Education, and Welfare. The area-wide plans developed by these agencies would be utilized by State Health Commissions, also established through this legislation, in regulating the distribution, costs, and quality of services. It seems evident to me that these area-wide agencies, given substantial coordinating and planning powers and backed by State regulatory powers, might constitute much more powerful instruments for achieving regionalization than any of the previous efforts. Since this legislation would replace Comprehensive Health Planning, Regional Medical Programs, and the Hill-Burton Program, it could reduce the overlap and confusion in the roles of these current programs in achieving the objectives of regionalization. The Administration has stated its intent to submit similar legislation to the Congress in the near future, although the details of the Administration's proposal are not known at the time of this writing.

Regionalization has become prominent in public thinking because the issues that lie behind it are those that must be resolved if we are to improve the nation's health system.

The Issues at Hand

Central to efforts to reform the system are the issues of authority and accountability. One can argue that the appropriate course is to restructure the incentives within the health system so that the forces of a competitive market can be brought into play. This is preferable, many believe, to strengthening public authority over the providers of services. A persuasive argument was made for this by Dr. Paul Ellwood in proposing a system in which Health Maintenance Organizations would compete with each other and with existing fee-for-service programs. But almost everyone, including Dr. Ellwood, recognizes the limitations of health as a free market model—especially when one considers the consumer's difficulty in judging the quality and value of services rendered. There is also little evidence that a market approach will solve the problems of service distribution and the growth of natural monopolies. A true competitive market approach also seems politically unfeasible since neither the public's representatives nor the health professions seem willing to take the risks involved, although I would suspect their reasons for being reluctant are quite different. So we are back to some sort of planning and regulation on a regional basis.

This immediately raises the question of the role of the state and local government in such functions. It seems to me that the overwhelming sentiment in this country is still against giving state or local governments direct supervision over health services—in contrast to other social services such as education. By and large, innovations that have been made in health care delivery have been supported by either private or federal funds—not state funds. And yet there are signs that the situation is changing. State governments have begun to undertake activities in planning and regulation that extend well beyond the realm of public health. Examples are the strong role of New York State and recent proposals by the Governors of Wisconsin and Pennsylvania. All states have some regulatory authorities dealing with the licensing of health personnel and facilities. Twenty-one states recently passed so-called certificate-of-need laws, which regulate the construction of new hospital facilities. So state and local governments do have a part to play in the development of health services on a regional scale.

But how that authority is to be organized is not clear. Not only are there concerns about direct government interference, but political boundaries often cut across natural medical regions. Patients in some areas must go to another state to obtain certain kinds of medical care. I believe what will emerge are combinations where the regulatory authority resides in government bodies and responsibility for the delivery of services rests in nongovernmental organizations. While such hybrid arrangements may be disturbing to public administration purists, the combination of public and private functions is, I feel, the likely pattern of regionalization in this country in future years. This seems to me the natural American response.

A related issue concerns the measurement of the results of health care. Until there are available on a regional basis accurate and comparable data on the utilization of health services and the outcome of care, it will be difficult to exercise authority or hold health providers accountable for their actions—except on the matter of costs. Even there, the most commonly used indicators are hospital per diem charges and physicians charges, which are not valid measures for accountability.

Another important matter that must be considered is the role of the university health sciences center. The teaching hospital is an essential component of the health resources of a region. The university center cannot, therefore, escape significant responsibility for regional planning. Attention must be paid to the spread of new knowledge to programs throughout the area. The nature of medical care is so dynamic and the existing gaps in knowledge so extensive that any arrangement for delivering services must allow for the incorporation of advances emanating from the laboratory. What is needed is a planning process through which the appropriate functions and responsibilities of the university center can be identified and exploited.

Then too, one must take into account existing federal programs when developing regional plans. The proposal by the CED, the Rogers-Roy-Hastings bill, and the Administration's proposal would all create new regional authorities replacing or subsuming the area-wide comprehensive health planning agencies. This seems appropriate since the planning function which those agencies perform would be a necessary element in achieving regionalization. The legislative proposals would also replace and reformulate the functions of Regional Medical Programs. It seems to me that programs such as CHP and RMP were intended to be modified as public policy in health responds to new perceptions of need. The key issue is not whether modification should take place, but whether it can be accomplished in a way that does not disrupt the contributions of these agencies.

Another issue is the relation of any new regional agency to other important new Federal initiatives, such as the Professional Standards Review Organizations, the price control activities under Phase IV, and the promotion of Health Maintenance Organizations. If these developments concerned with quality, cost, and organization of services are pursued outside the purview of the regional agency, the efforts of that agency will be undermined. The same holds true for major changes in the financing of health care—most particularly, the institution of National Health Insurance in any form.

My conclusion is, then, that we need a national policy that includes provision for regionalization. This national policy should be much broader than hospital planning, and should include arrangements for the dissemination of medical knowledge, the development of regional health data systems, the conduct of health care experimentation, and consideration for the distribution of health resources. Planners should recognize and build upon previous efforts to develop regional activities in health. There should be considerable diversity among regions to stimulate innovation, and enough time should be allowed for a careful evaluation of the results. The regional plan should provide an umbrella under which a variety of service organizations can operate—so that choice to the consumer and healthy competition among providers is encouraged whenever possible. This will stimulate the development of dynamic forms of care. Finally, there should be some means of accounting to the public for the results of care delivered in a given region. State and local regulations can be enacted to assure proper accountability, without making such programs the direct responsibility of government.

Such a national policy would, in my opinion, be the fulfillment of forty years of discussion. The diversity of approaches used would be characteristic of the American political process. It would allow for a productive molding of public and private interests in the provision of services. I believe that while planning must proceed with substantial participation by the Federal government, it falls to the private sector to furnish the imagination and initiative necessary to effect a more coherent system of health care in the United States.

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ADAMS-STOKES SYNDROME

This syndrome consists of syncope or convulsions caused by cerebral hypoxia due to partial or complete atrioventricular heart block. There may be transient ventricular standstill of 2 or 3 seconds or more prolonged ventricular pause of 20 to 30 seconds. The syndrome was probably first described by Morgagni in 1765, subsequently by Adams in 1827 and by Stokes in 1846. It is relatively rare before the age of 30 years and is more common in later decades.

The disturbance of cerebral circulation is variable and depends upon the degree of bradycardia. There may be only transient dizziness or mild syncopal attacks, or there may be prolonged recurrent attacks of unconsciousness with epileptiform convulsions ending in apnea. During the syncope there is a marked drop in blood pressure and perhaps an absence of pulse and heart sounds.

The syndrome occurs most commonly in elderly, predisposed individuals with electrocardiographic evidence of arteriosclerotic heart disease and disturbance of conduction through the bundle of His. When it occurs before the age of 40 years, the most common etiologic factors are either congenital or rheumatic heart disease, diphtheria, and acute infections. It is occasionally due to the bradycardia caused by digitalis poisoning. Differentiation from other causes of syncope may be difficult when the syndrome is due to ventricular fibrillation and tachycardia. Differential diagnosis should include evidence afforded by an electrocardiogram.

Therapy is likely to be unsatisfactory in a severe degree of heart block, and the prognosis should be guarded. During syncopal attacks epinephrine hydrochloride 0.5 cc. of 1:1000 solution should be given intramuscularly each 30 to 60 minutes. During ventricular standstill external electric stimulation of the heart is reported by Zoll and associates to have restored adequate circulation and prevented the recurrence of irregular ventricular tachycardia. Prophylactic therapeutic agents include either vagolytic (atropine, banthine) or sympathomimetic drugs (epinephrine, isuprel). Digitalis or other parasympathomimetic preparations are usually contraindicated.—MacMurray, F.: *New England J. Med.* 256-643, 1957: Zoll, P., *et al.: Circulation* 9:482, 1954.)

Professional Standards Review Organizations and Quality Assurance Programs— They're Not the Same

Marvin Garrell, M.D., and Daniel Hamaty, M.D.

The rapid emergence of peer review activities by and for commercial and government insurance carriers as a means to contain costs has overshadowed the slower moving developments by the professional organizations concerned with measuring quality of care as an indicator of the need for educational measures.

Cost containment through Professional Standards Review (PSR) and Continuing Medical Education through Quality Assurance Programs (QAP) can, should, and in fact need to coexist if either is to be effective in the broad overview of medical care. However, as independent approaches to medical care evaluation, they are very different entities. The Quality Assurance Program for medical services of the American Hospital Association, for example, is designed to identify the continuing education needs of the entire professional staff on the basis of evaluation of performance, working towards the objective of constant improvement of the quality of care, principally within the hospital.[1] The general provisions of the Professional Standards Review Organizations purpose to assure, through the application of suitable procedures, that the services for which payment may be made under the Social Security Act will conform to appropriate predetermined professional standards for the provision of health care.[2] There is a basic difference in purpose, therefore, with QAP emphasizing self-education while PSR emphasizes conformance to standards.

There are also profound differences in the two as far as the practicing physician is concerned. The standards in PSR relate to utilization elements of physician decisions, i.e., where the patient is to be treated (hospital, office, nursing home), how long (length of stay or frequency of visits), and to what extent he receives services (a blood count, or ECG, or X-ray, etc.). The QAP standards deal more with decision making by the physician based on his admission and discharge diagnosis and intermediate observations. A QAP, therefore, is less concerned with the location or duration of the treatment than with the expeditious and successful application of available medical science to a person in need.

PSRs have so far concentrated on developing standards for conditions where a steady increase in cost is evident, such as elective surgery, strokes, hip fractures, B12, penicillin shots, etc. QAPs select topics based on the indication for educational improvement as noted by the medical staff or medical society. For example, if there is a feeling that the expeditious and successful care of renal failure is in need of improvement, the QAP identifies standards that will answer relevant questions in a quantifiable manner and are applicable to their own special needs.

PSRs select the individual physicians to be scrutinized based on their failing to observe certain norms related to frequency, location, type and amount of medical care delivered. QAP does not work at the level of the individual physician, but with his professional community (the pediatricians in X hospital or the community of physicians in X society). The QAP also looks at the representative cross-section of care of the disease or treatment under study rather than the PSR method of focusing on those who deviate from a norm. The PSR operation is primarily a data processing whereas the QAP is entirely a medical audit.

The QAP approach to the execution of the peer review is at a different level than the PSR. The QAP requires of the peers to judge the validity of the standards and the relevance of the data from the medical audit in terms of applied medical science. It asks the peer reviewer if medical judgment and skill were applied to a particular case or a series of cases, and thus, by necessity, the peer reviewer in the QAP must have expertise in the area under study. On the other hand, the only requirements for a PSR 'peer' are the possession of an MD degree, and, hopefully, a practice in the same community. Further, the PSR peers are asked to adjudicate, one by one, cases that fall outside of the norms and pass judgment on the individual performance of a physician on a case. The only other data the PSR

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peer may consider in his adjudicative role would be a profile or list of cases or treatments that the physician has treated in the past.

The most striking difference between PSRs and QAPs is the nature of the corrective action taken for deviation from the standards. The PSR uses a "stick;" the claim is denied, the physician is told to dispose of his care or is otherwise disciplined, possibly including a fine. The QAP lays the onus of corrective action on the medical staff or society to counsel, persuade or carry out some other educational program in the context of professionalism. PSR is therefore external as contrasted with the internal (in-house) review of the QAP.

To further the quality of physician performance it is essential to involve the professionals in developing the criteria assessing the care. This will not only facilitate implementation of educational programs, but is also the only way that effective improvements will be readily adapted. The knowledge and skills necessary to deliver good quality care are often available, but are not utilized until the facilities and capabilities are made known to the physicians. This can be illustrated by a simple review of data available on blood use in the hospitals in Connecticut. Since 1960, hematologists and blood bank directors have pointed out the efficacy and efficiency of utilizing packed red cell unit transfusion in place of whole blood. The net results of such utilization of packed cells would be conservation of plasma products, lessened cardiac failure and lessened allergic and pyrogenic reactions. At this time our leading medical journals are still publishing articles exhorting this change. The ideal use of packed cells is estimated as an institutional experience averaging 80% of all transfusions. In 1965, data on blood use was examined for hospitals in Connecticut which revealed packed cell use from 0% to a high of 30%. Many of the hospital staffs reviewed their data with the criteria of good transfusion practice but many only attempted lectures without relating this to their own practice. The range as determined from December 1973 data, after audit education, is from a low of 31% to a high of 93% (Figure 1).

It is reasonable to predict with QAPs of this nature, i.e., criteria development and data review using literature validated standards, would result in desirable changes in many other areas of medical practice, such change having little to do with the costs of medical care.

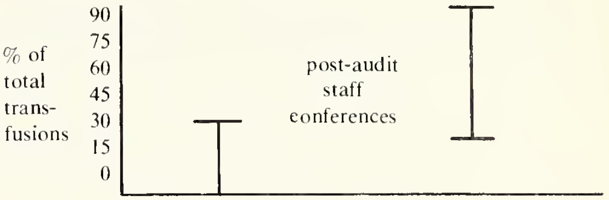

Figure 1

Use of packed cells in 39 Connecticut hospitals before (1965) and after audit-education.

Both PSRs and QAPs are needed, and both will require careful and continuous monitoring by the profession. The PSRs carry with them the threat of conformity, mediocrity, stifled innovation and freedom, as well as encroachment on the privacy of our patients. Because they are motivated by financial concerns, PSRs stand to threaten the identity of the QAP and its professional educational thrust. The QAPs stand to weaken progress in applied science due to their lack of support to date from the profession (Table 1). Working together PSRs and QAPs might realize: economy of total effort (money & manpower), avoidance of underutilization, contained costs and maintained quality, upgrading of the underperforming professional, relevant health planning and education, and maintenance of a high professional milieu with the continued confidence of the public. (Table 2)

TABLE I

CONTRASTS BETWEEN THE PSRS AND THE QAPS

	PSRs	*QAPs*
Emergence	From insurance carriers	From the profession
Standards	Built on the MD's decision of where and how much he treats the patient	Built on the MD's applied medical science decisions
Selection of Conditions for Review	Based on where the cost pinch lies	Based on a determined need for better care
Use of Peers	Use any MD in the community	Use MDs with expertise in the area under study
Corrective Action	Use a "stick" (deny payment, etc.)	Counsel, persuade, educate
Source of Control	More external than internal	More internal than external
Threats	Conformity, mediocrity, stifled innovation, increased costs	Increased costs, failure to advance applied medical science by suppressing individuality

TABLE 2

THE VALUE IN THE COEXISTENCE OF PSRS AND QAPS

Economy of effort, physician, administrative and technical manpower
Similar source of information
Assure public confidence
Avoid underutilization
Contain costs without loss of quality
Salvage under-performing professionals
Avoid transition from professional to technical medical care
Effect relevant health planning and education

QAP is really natural for physicians because it is an extension of the scientific method applied to groups of physician-patient care. In some ways it is unfortunate that the PSRs see the value of the methodology and borrow some of its elements. Let us hope that reflections of this nature will help physicians keep PSR and QAP in proper perspective, the ultimate gain being improved patient care.

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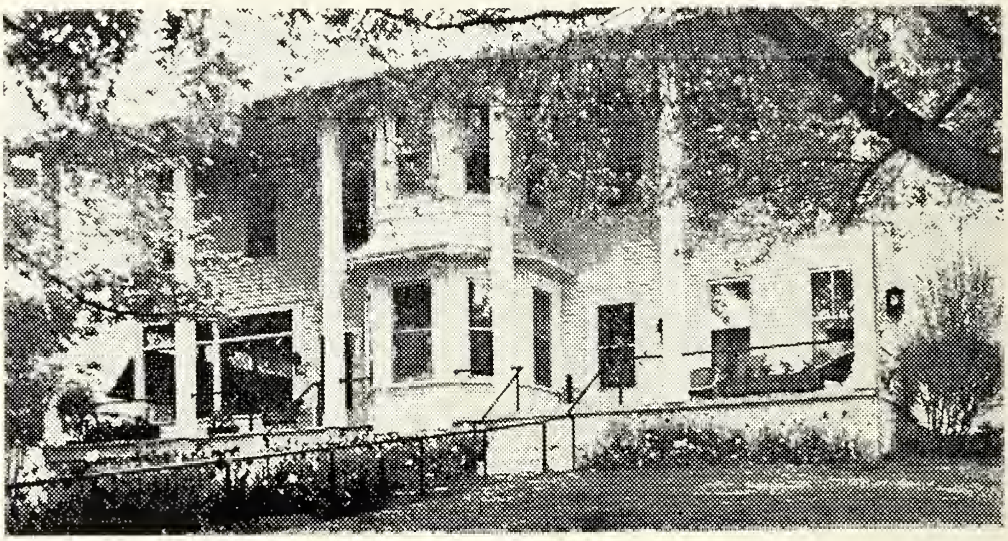

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Marriage Problems and Professional Intervention

Robert S. Redmount, J.D., Ph.D.

This is the first of two articles on the subject of marriage consultation by professionals and, especially, physicians. The second article, titled, "Marriage Problems and the Medical Professional," will appear in the September issue of Connecticut Medicine.

The spate of legislation in recent years offering marital dissolution without culpable cause, and affording optional or mandatory conciliation efforts, brings into focus issues of professional intervention into marriage problems. The physician, like the marriage counselor, lawyer, clergyman, psychologist or other mental health worker, may be a professional intervenor in marriage problems. Mostly, he comes to this collaterally as he is consulted on a variety of personal matters in the course of ministering to the health of his patients. In some instances, most notably where the practitioner is a psychiatrist or gynecologist, marriage matters may be one focus in the physician's professional practice. What the attending physician thinks about a marriage, what he then advises or does about it, how he does it and with what effect bear careful consideration in their impact upon marriage and in their reflection upon the nature of professional ministration to patients.

A. Some Practical Considerations in Intervention

At the outset it is the parties who structure the intervention, by choosing the time, purpose and conditions under which it is to occur. One or both parties may have reached such a point of exasperation or futility in their marriage that there seems no possibility but to seek some outside help and/or seek a divorce. For others, seeking professional intervention is a more concerted strategy to influence the other party or the course of a marriage in some particular ways. It may also be a means to seek self-help that hopefully will in turn affect the marriage. Few parties will view intervention into marriage in ideal terms, as a preventive measure before problems, attitudes and feelings become exacerbated. More characteristically, it is a state of mind, attended by rather insistent emotion, that forces a disposition or decision to seek professional intervention. almost as the last available resource. Thus marriage intervention occurs most often in a state of crisis between the parties where extremely skillful handling of the parties' state of mind is important and may even be critical to the outcome.

The parties' choice of an intervening professional may reflect the level of fear or hope, depression and dependency, or anger and anxiety they are experiencing. There may also be some kind of underlying conception or stereotype concerning what it is that professionals of a particular kind do. Lawyers are tough and get divorces. Physicians give general aid and comfort and usually have real or apparent prescriptions. Or, negatively, social workers are busybodies and "do-gooders" who engender more problems than they solve. The initial choice of professional in itself may suggest an anticipated strategy concerning the handling of the marriage. One party may choose a lawyer to back demands and try to coerce particular results in a marriage. Another may choose a psychologist hopefully to affect one's own or another party's state of mind so as to gain more understanding and conciliation in a marriage. A third may consult a physician with a sheer sense of hopelessness, perhaps looking for some miracle from the physician analogous to a "miracle drug." Even the structuring of problems and party behavior toward a professional intervenor may depend upon attitudes and stereotypes regarding particular professionals. The lawyer may be asked, "Should I get a divorce?" or told, "Get me a divorce," whereas the same problems addressed to a psychologist may say, "Help me with my marriage." Typically, one of the critical needs implicit in choice of professional is that the professional will be understanding and supportive, sometimes to the degree that it is strong advocacy and protection rather than reasonable conciliation that is sought. Some parties wish to control the nature and extent of the professional intervention whereas others seek indications of direction from the professional and any measure of specific help that promises to ameliorate the situation. Party tolerances for intervention are a matter of some importance. An impatient or highly discouraged party may seek resolution, even recklessly, so long as

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certainty of status and the removal of a condition of crisis can prevail. Others, whether from need, disposition or intelligence, are more inclined to "work with problems" in order to achieve the most beneficial or satisfying result. Matters are not made easier when individual parties to a marriage differ as to their choice of and expectation from professional intervention, and when their tolerances for such intervention do not match.

Enter now the professional intervenor whose professional kit includes his own set of personal and professional biases about marriage, his specialized but almost necessarily limited techniques for dealing with the matter, and his particular capacities and tolerances for working with others on their personal problems. Some professionals consciously or unconsciously entertain their fantasies in their work, and see themselves as judges, or champions, or benevolent parents, or some other. Others at least consciously eschew these roles and stress concrete goals and techniques for dealing with their patients' problems. They may combine their conceptions of who they are and what they do in working with their patients. Lawyers, whose principal work and social image is associated with litigation and courtroom activity, act as palpable authority and may emphasize legal elements in their analysis of a divorce matter. Psychiatrists, on the other hand, entertain different conceptions about handling marriage problems. Their concepts and solutions come from an understanding in depth of human behavior. In plying their professional trade, they are more likely to see marriages in terms of personal psychological conflicts and possibilities for their solution, within or apart from a marriage. Professionals seek "results" but there are differences in conception regarding the time it takes for a result, the kind of result to be expected and how to achieve the result. Lawyers are prone to seek faster or more definitive results, serving the important principle that certainty may often be even more important than substance in the resolution of a case. Mental health workers, on the other hand, tend to deal with matters as if time and other resources are of lesser concern in the service of some postulated outcome. In defense of these workers, perhaps there is recognition here that marriage matters have reverberations that are immediate and into the future, that may affect immediate parties and other close family members as well, that emotional, physical and mental state of well-being is involved as well as social and economic considerations. Again, professionals stress in their ministrations those elements of importance that they are most trained to see.

The professional's tolerances and capacities for a variety of human relationships are also a matter of importance in personal consultation. Some professionals are "task oriented;" others are "people oriented." Some are empathic in matters of intimate concern and others feel more uncomfortable in such close involvement. Some consider the element of human relationship, and feelings of liking or satisfaction, as crucial to their professional role, even to their own persons. Others regard that highly competent, objective service, using the best technical skills of their trade, is the crux of professionalism. It is these personal dispositions in professionals that may temper the way in which they use their professional roles and skills.

There would be something less than candor if one did not also recognize that economic necessities are a governing influence in professional services. Lawyers are conditioned to feel that they are entitled to payment and are paid for "legal services" and not for psychological ministration. Marriage counselors are compensated for the time they spend directly with their parties in the resolution of marital problems. Physicians may feel that marriage advice is for them no more than the offering of personal sagacity and is not or should not be compensable as professional service. It is the economics of the profession that to some degree structures how much and what kind of intervention the patient will receive. The professional's insecurity about his economic status, most characteristically early in his practice, is probably an incentive to do more for his patient than he perhaps should. Contrariwise, with some professionals, the lack of a sense of personal urgency to provide service may result in little effort to deal with patient problems, such as the problems of a marriage, as one should. The implication of the last remark may also be read to mean that there is a point beyond which one may cease to feel challenge in working with patients. This surfeit of a kind of professional experience may contribute to more insensitive professional dealings, not alone because of personal economic urgency but because of personal boredom.

B. A More Formal and Theoretical View of Intervention

In slightly more formal and theoretical terms professional intervention into marriage problems is, firstly, a matter of problem definition. Party perceptions and understandings are augmented and perhaps synthesized by professional conception to produce a view of where the important issues lie and how they are to be understood. A wife may express the marital problem in terms of a lack of sensitive caring and affection from her husband. The husband views the problem in terms of the wife being too demanding and unrealistic about the personal, financial and job pressures upon him. The intervening professional, operating more or less within his conceptual framework, may conceive that the marital problem is essentially a matter of sexual incompatibility, or of personality differences, or of a lack of clear communication or realism on the part of one or both parties. The major tendency is to reduce marital problems to single dimensions so that, in effect, various influences or causes and effects are reduced to or assumed under one category. Thus, if the marriage counselor's conceptual bias is that sex problems underlie marriage difficulties, then all roads lead to sex. If the clergyman's bias is that a lack of charitable and ethical relationship underlies marriage difficulties, then all roads lead to communications problems tinged by religious and ethical conviction. If the physician lacks a conceptual bias about marriage problems but does have his own viewpoint from personal experience and observation in life, then he perceives marital problems in terms of his personal unsystematic psychology. He is likely to render a simplistic behavioral definition to which is appended some general, platitudinous advice and reassurance. More fortunately, perhaps, he may recognize the limits of his professional and technical competence to handle the matter and may farm the problem out for more appropriate professional definition and handling. In truth, most marriage problems are a matter of sexual maladjustment, communication difficulties, personality differences, financial difficulties, larger family involvement, value and expectation differences, religious convictions, and/or emotional upset or instability, affecting the consciousness and perception of the parties and acting as both cause and effect in producing pain and frustration. Not all elements are involved in a given problem and some may actually be beneficial or restorative to a marriage. The task of diagnosis lies in identifying separate influences and perceptions and understandings that contribute to harmony and, most especially, disharmony. One also seeks to probe the relationship that exists between one kind of symptom or substance and another. In some instances this is a matter of broadening the scope of consideration involved in problems and in others the matter is one of extending depth in one's understanding of a particular problem or facet of a problem. Available party information, personal probing dispositions of the professional and his theoretical framework may largely determine in which direction he will take his inquiry into problem definition.

Problem definition, one may observe, is not so much analysis at one stroke as it is a sensitive development of the issues by drawing parties out regarding their perceptions, feelings, thoughts and state of mind. This process, engaging both parties to a marriage singly or together, involves skillful interviewing and sensitive probing by a professional who has a sufficiently broad conceptual framework for marital problems so that he knows the points to seek and probe in party communication and other behavior. He operates within a conceptual framework and his probing techniques may include direct questioning about observable facts or beliefs, subtle queries or observations rendered in order to draw out party feelings, tentative interpretation in which party reactions are searched in order to affirm hypotheses and judgments, silent responsiveness in order to afford parties the opportunity to bring forth their more complete feelings and attitudes, and more. These techniques need to be used with both skill and patience, for an immediately inappropriate technique for probing, or excessive reliance on a particular technique, may produce distorted or incomplete information and impressions rather than a true picture. Clearly, "marriage diagnosis" is a difficult but nonetheless essential matter of professional skill and understanding to be comprehended within the framework of a good understanding of professional-patient relationships.

Problem solution follows in a relatively logical order of working with marital problems. Problem solution is most essentially arriving at decisions regarding desirable intervention and, simultaneously or subsequently, intervening. Hopefully, this is based upon adequate diagnosis of the problem. It contemplates some variety of decision-making styles and decisional possibilities. There then occurs, mostly but not always, technical and practical implementation of the decision.

There are different styles of decision-making in professional intervention. Depending upon party or professional predilections and temperament, and sometimes depending upon the nature of the problem, it may be the parties or the professional who take the larger role. In some instances, party wishes are taken at face value and the professional uses his technical understanding and skills to implement as best he can what his patient has in mind. In other instances, parties and professional together share or negotiate their information, understanding and biases in order to produce some joint approach to problem solving. In yet a third view, the professional considers himself to be a sufficient authority on the matter and the patient defers, so that it is the professional who "takes the case over," so to speak, and independently formulates decisions and subsequent action. The latter is more often the paradigm in medical matters where the skills and knowledge for solution and implementation are characteristically within the competence of the physician.

Marital problems add to the complexity of decision-making since not one but two immediate parties, and ancillaries as well, may generate one or more decisions. They may work with one or more professionals, with each having his own professional intervenor, both having the same intervenor, or both sharing professionals who deal with different aspects of the problem. Needless to say, this may complicate or divert rather than aid problem solving. A marriage counselor may endeavour to work with both parties separately or simultaneously. Each party may work with and through his own attorney, and differences may have to be negotiated between professionals as well as between parties. Both parties may work simultaneously or successively with, for example, a psychologist, a clergyman and one or more attorneys. Effectively, then, interprofessional relationships may become important in a coordinate solution to a marital problem.

Decision-making in marital matters may follow the logical sequence of, first, fact determination, then professional-theoretical input, then decision-making, subsequently decision implementation, and ultimately appraisal and evaluation. Not all intervention in marital matters follows such a sequence, however. Problem definition, for example, may become problem solution *in se*. The professional intervenor, by helping to clarify differences between parties, may resolve the differences and void the need for further intervention. Desirable as this may be, though, some seemingly simple definitions and solutions do not necessarily provide a helpful or desirable result in marital problems. For example, a categorical view that a request for divorce is determining, or a professional's quickly rendered judgment by fiat that divorce is the desirable answer to a marriage problem, catapults the parties into a solution of divorce without real consideration of possible true feelings, alternatives or consequences. In such a preemptive solution, the problems disappear in the same manner that a physician might cure a localized, nasty hand infection by cutting off the patient's arm. Adept rationalizations may also be offered to justify a questionable preemptive decision.

Another possibility is that a sequence of decisions, or "if . . . then" situations, may occur. A marital problem may first be addressed to a marriage counselor. If problem resolution does not occur, then legal intervention may be the strategy of choice. If negotiation of differences in settlement does not occur, then truly adversary litigation may be required. The sequencing of decisions, each held in readiness in the event a prior decision fails, desirably requires of the professional intervenors that they pace their efforts and attitudes so that they are applying the right kind of effort for the appropriate stage of problem solution. A marriage counselor may continue to insist on counseling, or may have diverted the issues, when a next stage or different effort in dealing with the marital problem is called for. An attorney may be, by design or temperament, too impatient and preemptive about the possibilities of marriage counseling or of settlement negotiation. He may precipitate the matter into harsh and costly litigation where less pressuring tactics might have produced a different and better result.

Mention should be made of another, very real decisional possibility. Marriage problems may, at various stages, involve many simultaneous decisions to be made. A decision about whether to continue a marriage may simultaneously involve questions of effective communication between the parties, sexual compatibility, handling the children, the use of money, and the like. A decision about terms of divorce may simultaneously involve issues of property settlement, custody arrangements, alimony and support, etc. The process of decision-making here requires especially great tact and skill, though it may be rendered simpler and easier where parties have or have acquired a disposition to harmonize or agree. There may be a matter of diplomatic skill in knowing which matters to press first for a consensual result, which to avoid or attempt to redefine as much or as long as possible, what style or arrangement in consultation is best likely to produce a consensual result, etc. Negotiation skill is also involved in knowing which parties to press on what issue, what kind of persuasion is likely to be most effective on particular parties or issues, and what kind or range of negotiation result is likely or possible.

Professional intervenors need to realize that there is an emotional quality about marriage problems that, in some degree, sets such problems apart from many other kinds of matters on which consultation is sought. There is usually a heavy investment of feeling on the part of the parties and state of mind is often acute at every stage from the earliest moments of problem definition to the problem's seeming end in decision implementation and beyond. There is high personal (psychological) risk involved for the parties as well as practical or social risk. Exaggerated concern, and self-concern, defensiveness, and sometimes even explosiveness are not uncharacteristic. Effective decision and effective result frequently depend on maintaining the confidence and good will of the parties, to a degree that may not seem important in other more "objective" matters. The counseling skills and "bedside manner" of the professional intervenor, affording a model of sensitivity and reasonable concern, strength and purposiveness, and tact and diplomacy, are important. They help the professional keep in tune with the parties, even at the risk that he suffers some nuisance. Where these qualities are lacking, problem solution in marriage may fail or be upended. The potential for continuing or renewed disagreement, especially where some underlying problems have not been noted, underlying feelings are unresolved, or other intrusive experience occurs, makes the need for a constant attuning to the state of mind of the parties especially important. To the extent that professional intervenors do not recognize or do not reflect these personal requisites and professional considerations in their intervention the likelihood seems considerable that unintended or non-salutary problem solutions may occur in a marriage. Additionally or alternatively, true problem solving may be shifted or postponed so that the problems patients experience take on another form or reoccur at a later time. A precipitous divorce may do little for a party whose real, perhaps undetected need was for psychiatric treatment in the first instance. Agreement and comfort on matters of sexual conduct, where sex has originally been offered as the symptom of marital disagreement, may not produce lasting marital harmony where some underlying differences of temperament and judgment between the parties are not truly faced and amicably resolved.

Unique considerations and problems in the physician's intervention in marriage problems will be discussed in the succeeding article.

HUMAN ORGAN TRANSPLANTATION: WORLD TOTALS THROUGH NOV. 1, 1972*

	Heart	*Liver*	*Lung*	*Pancreas*	*Kidney*
Transplant teams	61	37	20	10	233
Transplants	199	172	32	30	11,214
Recipients	196	168	32	30	10,346
Alive with functioning grafts	28	12	0	2	4,500 approx.
Longest survival with functioning graft	4 years	3½ years	10 months	1 year	14 years**
Longest current survival with functioning graft	4 years	3½ years	—	11 months	14 years

*Compiled by ACS/NIH Organ Transplant Registry.

**The longest survivor of kidney transplantation is a monozygotic twin.

Doctors Save Lives by Telephone

John G. Bellows, M.D., Ph.D.

MediPhone, an innovative new medical information and consultation service, is helping the nation's doctors save lives and treat patients more effectively. Twenty-four hours a day, seven days a week, MediPhone responds to calls from doctors who are confronted with perplexing medical problems or patients who have failed to respond to treatment.

This nationwide physicians' telephone consultation service immediately puts the inquiring physician in touch with an expert in a medical specialty. The MediPhone service offers the best in consultation and breaks down distance and time barriers, all at a fraction of the usual consultation fee.

The Chicago-based MediPhone program demonstrates its life-saving potential almost daily. Recently a doctor in a small northern Illinois community was called to treat a patient who had been bitten by the deadly brown recluse spider. This species has only recently migrated from the South to the northern parts of the country. It requires a minimal temperature of 40° F to survive. Thus, in colder climates it may be found in such places as closets and basements. The physician who called MediPhone had never encountered a similar case and requested information on the treatment of the bite of this poisonous spider. Time was critical; delay would cause much suffering and even endanger the patient's life.

The attending physician immediately dialed the nationwide MediPhone physician's consultation service telephone number (312) 782-7888. Moments later he was in consultation with an expert toxicologist at The University of Texas Medical Center in San Antonio. The expert informed the calling doctor that the modern management of the recluse spider bite required a wide excision since the bites are multiple, and the administration of large doses of cortisone. Within hours, the patient had been treated according to the plan outlined by the consultant. The immediate application of these life-saving measures undoubtedly saved the patient from a great deal of pain and possible death.

In another emergency, a farmer in Kansas fell off his tractor while his wife and several farm hands stood helplessly by, a steel blade of the rotary machine severed the farmer's right arm about one inch above the wrist. The farm workers rushed the farmer and his severed hand to the nearby family physician, who in turn called MediPhone. MediPhone connected the family physician with a surgeon at a nearby university trauma center. The patient was immediately taken to the trauma center where the severed hand was reattached by a plastic surgeon. Two weeks later the patient was able to move his hand and wrist. Although the hand has not yet recovered its sensory functions, complete recovery is still possible.

MediPhone also performs educational and consultative services for non-emergency calls. A doctor in Yuma, Arizona, recently called MediPhone to obtain advice and recommendations from a specialist in lung diseases. For more than a week the doctor had been treating without success the 52-year-old proprietor of a local furniture store. At first the man thought he had a cold, but he developed a symptom complex consisting of 102° F temperature, cough, and pain in the chest. X-rays disclosed unfamiliar patches in both lungs. The physician was baffled by the X-rays so he called on MediPhone's resources.

The practitioner learned from MediPhone's lung specialist in New York that the condition was undoubtedly a mycoplasma pneumonia caused by a minute bacterium. Fortunately, the disease responds quickly and favorably to antibiotics such as tetracyclines and erythromycin. The patient responded to the proposed treatment and made a speedy recovery.

MediPhone was originated in 1972 by its director, Dr. John G. Bellows, a Chicago eye specialist. The service is sponsored by the nonprofit American Society of Contemporary Medicine and Surgery, a 7,000-member physician organization whose purpose is to disseminate the latest medical information to doctors. Among the leaders of the Society and MediPhone are the chairman, Dr. Morris Fishbein, medical author and former editor of the *Journal of the AMA*, and the president, Dr. Michael E. DeBakey, leading heart surgeon. The more than 600 consultants are located in some 60 university medical centers throughout the country. These include deans of medical schools, heads of departments, and outstanding specialists in all fields of medicine and surgery.

The Society and MediPhone are approved by the

DR. JOHN G. BELLOWS, University of Health Sciences, The Chicago Medical School, Chicago, Illinois.

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American Medical Association for continuing medical education. Therefore, the physician who uses MediPhone not only obtains medical information and consultation, but he also receives a certificate for credit hours in continuing medical education.

"Our main motive," Dr. Bellows explains, "is to help doctors practicing in an area where they have difficulty keeping pace with the best and most advanced medical care possible." However, Dr. Bellows emphasizes that the program is not a substitute for the consultant who personally reviews the patient's hospital chart, elicits a medical history, and examines the patient. Rather, it is intended to overcome barriers of distance and allow doctors to consult readily with experts on medical problems that may be unusual and baffling. Frequently the caller has need of information that may not yet have been published; MediPhone can provide physicians with the latest treatments available long before they appear in printed form.

MediPhone is available only to physicians. The charge for a MediPhone consultation is $25, from which the consultant receives a fee for his services. The charge for the consultation can be included in the patient's bill and may be covered by his health insurance carrier. MediPhone ultimately should help reduce the rising cost of medical care. Doctors who use MediPhone can provide better care for their patients, and better care is usually cost-saving in the long run.

MediPhone, the first and only nationwide physicians' telephone consultation service in operation, recently received a regional development grant from the prestigious Robert Wood Johnson Foundation. This grant will help pay for the administration of MediPhone and make its services better known to physicians. Current plans are to mail individual membership cards to physicians. It is hoped that wider use of MediPhone's resources will enable physicians to administer better health care to the public.

BOOK REVIEWS

COMMUNICABLE AND INFECTIOUS DISEASES. By Franklin H. Top, Sr. and Paul F. Wehrle, Editors. The C. F. Mosby Company, Saint Louis: 803 pp. Illus. 1972. $35.00.

Reviewed by Elisha Atkins, M.D.

The new (seventh) edition of this well-known text on infectious disease (first published in 1941) is a welcome addition to the medical library. A large number of distinguished collaborators (56 in all) have contributed up-to-date chapters (and 8 new ones) on their respective specialties, broadly covering the entire field of infectious diseases, both adult and pediatric (including some relative newcomers such as cytomegalic disease).

The organization is a conventional one with separate chapters (in alphabetical order) for each etiologic agent. In cases like staphylococcal disease, syphilis or tuberculosis, the wide spectrum of clinical entities caused by those organisms (depending on the site of infection) can thus be synoptically reviewed. A regional approach is used in 2 chapters dealing with bacterial pneumonias and meningitis, which allows for greater consideration of differential diagnosis and the specifics of treatment.

The publication of a new edition of this book at this time invites comparison with another multi-authored text in Infectious Disease edited by Paul Hoeprich (Harper & Row, 1972). In this text, the organization is in terms of regional infections (various segments of respiratory, GU and GI tracts; peritoneum, skin, meninges, cardio-vascular system, etc.), with etiologic agents (or occasionally, infections of anatomical subsections) grouped under each heading. This method presents disease under categories that more nearly resemble diseases as the practitioner sees them and thus allows for more rapid and meaningful comparisons among the spectrum of infecting agents for any one region of the body. It also makes for a larger number of shorter chapters (154 vs. 68) on more limited subjects since the spectrum of disease covered by any one organism is distributed in several different chapters. The basic subject matter, however, is much the same in the two volumes and different readers will prefer one or the other method of presentation as a matter of personal taste.

The strong points of the Top and Wherle text are the following:

1. A superb comprehensive and up-to-date chapter on chemotherapeutic and antibiotic agents by McCabe and Lepper. Spot diagrams presenting comparison of minimum inhibitory concentrations (MIC's) for various organisms (37 in all) together with blood levels achieved by various regimens for each antibiotic are unique, ingenious, and most effective for quick reference. They are in themselves almost worth the price of the book. There are also invaluable tables on usefulness of sensitivity tests and distribution of various agents in body fluids and tissues.

2. Detailed discussions (with tables, etc.) dealing with control and reporting of infectious diseases, immunization schedules, etc.

As is evident from these comments, these texts in many ways complement each other and the wealthy practitioner in a spacious office could usefully employ both. If I were forced to make a choice, I would probably opt for Hoeprich which has, I believe, a broader, more basic conception of infection as well as a more useful presentation of the subject matter than Top and Wherle. Both are well referenced.

The quality of paper, printing, and numerous photographic reproductions (many in color) are excellent in both texts and a credit to their publishers.

LABORATORY NOTES

Clinical Significance of Blood Lactic Acid Determination

Lactic acid, a product of the metabolism of glucose, is present in most biological fluids.

Lactic acidosis occurs when blood lactate concentration is greater than 2 mEq/L in association with an arterial pH below 7.37, in absence of other causes of acidosis. Normal values range from 0.6 to 2.2 mEq/L. Its level is significantly elevated in the following conditions.

1. Severe hypoxemia such as encountered during status asthmaticus or acute exacerbation of chronic obstructive pulmonary disease.

2. Cardiovascular insufficiency e.g. shock. Degree of lactic acidemia during shock has prognostic value; the higher the level, the lower the chance of survival. Levels above 9 mEq/L are very dangerous.

3. Spontaneous lactic acidosis occasionally occurs in association with underlying infections or inflammatory conditions e.g., acute pyelonephritis, acute peritonitis, acute pancreatitis, subacute bacterial endocarditis and in noninfectious conditions, e.g., gastrointestinal hemorrhage, myocardial infarction and in postoperative state. It has always been fatal.

4. In leukemia, lactate acidemia may be caused by infiltration of the liver by leukemic cells resulting in tissue hypoxia and impairment of lactate clearance.

5. In diabetic patients with non-ketotic acidosis occurrence of lactic acidosis in most instances is probably due to shock.

6. Phenformin (DBI) promotes lactic acid production. In several vitro studies it has been shown to interfere with cellular aerobic metabolism and thus to enhance lactic acid formation.

7. Type I glycogen storage disease (glucose and phosphatase deficiency) is associated with elevated blood lactate and pyruvate levels due to the inability to form glucose from glycogen.

8. Following Ethanol intoxication.

9. Hyperventilation results in elevated blood lactate levels during passive overbreathing under anesthesia as well as during conditions associated with pathologic hyperventilation.

10. In normal subjects following administration of glucose, as a manifestation of increased glucose utilization.

11. After strenuous muscular exercise following deficient oxygenation of the muscles leading to anerobic glycolysis with excessive production of lactic acid.

Clinical Signs and Symptoms

Clinical presentation is that of acute onset of severe metabolic acidosis (Kussmaul respirations and altered mental state ranging from confusion to coma) in a patient who has no other obvious preexisting cause. The definitive diagnosis is solely upon the demonstration of elevated blood lactate level.[2]

Treatment

Definitive methods of therapy will depend upon the etiology of lactic acidosis. Early recognition followed by I.V. bicarbonate is the treatment of choice. The test is now available. Fresh heparinized whole blood not over 1/2 hour old is needed.

N. Dah, M.D.

REFERENCES

1. Am. J. Med. 48: 209-225, 1970.
2. Tranguada, R.E.; Grant, W.J. and Peterson, C.R.: Arch. Int. Med., 117: 192, 1966.

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Summary of Actions
Council Meeting
Thursday, June 6, 1974

I. Attendance

Present in addition to the Chairman, Dr. D. A. Grendon, and the Vice Chairman, Dr. C. W. Johnson, were: Drs. Root, Jr., VanSyckle, Spitz, Backhus, Nolan, Gardner, Fabro, Bradley, Hess, Granoff, Rubinow, Ragland, Jr., James, Freedman, Krinsky, Roch, Canzonetti, Mendillo and Barrett.

Also present were: Mrs. Lindquist, Mr. Tomat, Mr. Sweeney and Dr. Richards.

Absent were: Drs. Cramer, Hecklau, Dambeck, Kamens, McGarry, Sadowski, Harkins, Magram, Eslami, Hastings and Klare.

II. Routine Business

Approval of Minutes

As published and distributed, it was VOTED to approve the minutes of the meeting of May 15, 1974.

Life Memberships

It was VOTED to approve applications for Life Membership received from the following eligible Active Members:

W. Howard Baldwin, 341 Broad Street, Manchester (H).
Nicholas E. St. John, 25 Charter Oak Avenue, Hartford (H).
William A. Zavod, 259 Prout Hill Road, Middletown (M).

Resignations, Appointments, Etc.

Woman's Auxiliary to CSMS: It was VOTED to invite the President of the Woman's Auxiliary, Mrs. George E. Roch, Willimantic, to be a regular guest at all meetings of the Council, and it was further VOTED to invite Mrs. Roch to appoint a representative of the Auxiliary to serve with the CSMS Committee on Public Relations.

Date of Next Meeting

The Chairman set the date for the next meeting of the Council for Wednesday, July 17, 1974.

III. Old, New and Special Business

CSMS-AHS Contract re Connecticut Medical Institute

It was VOTED to receive for filing and to approve for implementation the draft of a contract between the Society and American Health Systems, Inc. which stipulated the services to be rendered to the Society by AHS in establishing the Connecticut Medical Institute and the manner in which the Society is to compensate AHS for such services.

Report—Committee on Peer Review Systems

It was VOTED to accept for filing a verbal report presented by James D. Kenney, Committee chairman, in which Dr. Kenney advised the Council that the planning grant for the Connecticut Medical Institute had been approved by HEW in the amount of $142,000 for a period of 12 months, and that the first increment of the grant would be received by CMI on or about June 15. Dr. Kenney also reported that a meeting of all parties interested in participating in the Institute would be held on June 12 to conduct a joint review of the proposed bylaws and explore other matters relevant to activating the Institute at an early date so that operational activities can be initiated.

Reports—Fiscal Subcommittee

It was VOTED to act on a series of reports of the Fiscal Subcommittee as follows:

(a) *Cancer Coordinating Committee:* To approve the FC's recommendation that the sum of $1,500 be appropriated as the Society's contribution toward meeting the costs of publishing and distributing a booklet on the follow-up care of cancer patients. The project is to be undertaken jointly by the Society, the Connecticut Division of the American Cancer Society (which will contribute $1,000) and the State Department of Health (which will bear the costs of distributing the booklet to all licensed Connecticut physicians, cancer researchers and other interested individuals and agencies).

(b) *Committee to Study Perinatal Morbidity and Mortality:* To approve the FC's recommendation that the sum of up to $500 be appropriated as the Society's contribution toward meeting the costs of a "5th Biennial Perinatal Seminar" to be held during the month of November, 1974. As in the past, the Seminar will be co-sponsored and co-funded by the Society, the Connecticut Chapter of the American Academy of Pediatrics, the State Department of Health and the Yale and UConn Schools of Medicine.

(c) *Sponsorship, Medical Students to AMA Meeting:* To approve the FC's recommendation that the Society sponsor the attendance of a medical student of the Yale and UConn Schools at the forthcoming AMA Annual Session in Chicago, and that the Society contribute round trip tourist class plane fare toward financing the attendance of such students. The Deans of the respective medical schools will be apprised of this offer and asked to select one student who may wish to attend the meeting. The special purpose behind this project, recommended by AMA, is to give medical students opportunity to participate in the Medical Students Business Session (to be held on June 22), and the general purpose is to give them exposure to the AMA House of Delegates in action and to the Scientific Assembly. The Business Session may draft resolutions and policy statements and submit them to the AMA House of Delegates for action.

Report—Ad Hoc Committee on Acupuncture

It was VOTED to accept for filing the minutes of a May 2 meeting of the Committee and a second document titled: "Progress Report" (on the Committee's subject studies and conclusions reached thus far). It was further VOTED to request the Ad Hoc Committee to apprise the Council as to the conditions (diseases) for which acupuncture treatment may be medically indicated at the present time. Finally, it was VOTED to table action on a recommendation of the Committee that the Society sponsor a seminar or workshop on acupuncture for physicians and dentists.

Date and Place of 1974 Semi-Annual Meeting

It was VOTED to accept for filing an invitation extended jointly by the Tolland and Windham County Associations for the 1974 semi-annual meeting of the House of Delegates to be held on the premises of the University of Connecticut at Storrs. It was further VOTED to accept said invitation with thanks, and to set the date of the meeting for Wednesday, November 20.

Request for Amendment—Employment Contract for Project Director, CACS

It was VOTED to accept for filing the minutes of the Committee on Statewide Medical Planning, meeting of May 22, 1974, and three related documents which, collectively, requested that the Council approve a proposal that the Project Director of the CSMS Connecticut Ambulatory Care Study, Dr. Daniel Hamaty, be allowed to continue as Project Director on a part-time basis (half-time or less) with appropriate adjustments made in his salary and current contract with the Society (termination date: 10/4/74). After discussion, an action was taken on the request as follows:

It was VOTED that the Council express favor for revisions being made in Dr. Hamaty's current contract with the Society which would provide for his continued service to the Society as *sole* Project Director, with full responsibility, on a part-time basis.

Policy Statement re Acceptance of Fees for CRMP Service

Having noted that this matter had been discussed at the May 22 meeting of the Committee on Statewide Medical Planning, a subject policy statement was adopted as follows: The Council rules that the official representatives (designates) of CSMS on the CRMP Advisory Board may, if they wish, accept a fee for serving on CRMP site visit teams.

Ruling on Eligibility for Student Membership

A resident physician serving in a Connecticut hospital requested a ruling as to his eligibility for Student Membership on the ground that, although licensed to practice medicine in the State, his exemption from payment of a license registration fee precludes his engaging in practice outside the hospital or "primarily for remuneration." The Bylaws provide that "physicians *not* licensed to practice medicine in Connecticut" and who are serving as interns and residents in Connecticut hospitals are eligible (along with medical students) for Student Membership. In light of the foregoing, the Council VOTED to rule that licensure in Connecticut, per se, disqualifies interns and residents from being elected to Student Membership in the Society, as stipulated in the Bylaws.

N.B.: *The foregoing is a summary of the proceedings and actions of the Council on June 6, 1974. Detailed minutes of the meeting are on file at 160 St. Ronan Street, New Haven, for perusal by any interested member of the Society.*

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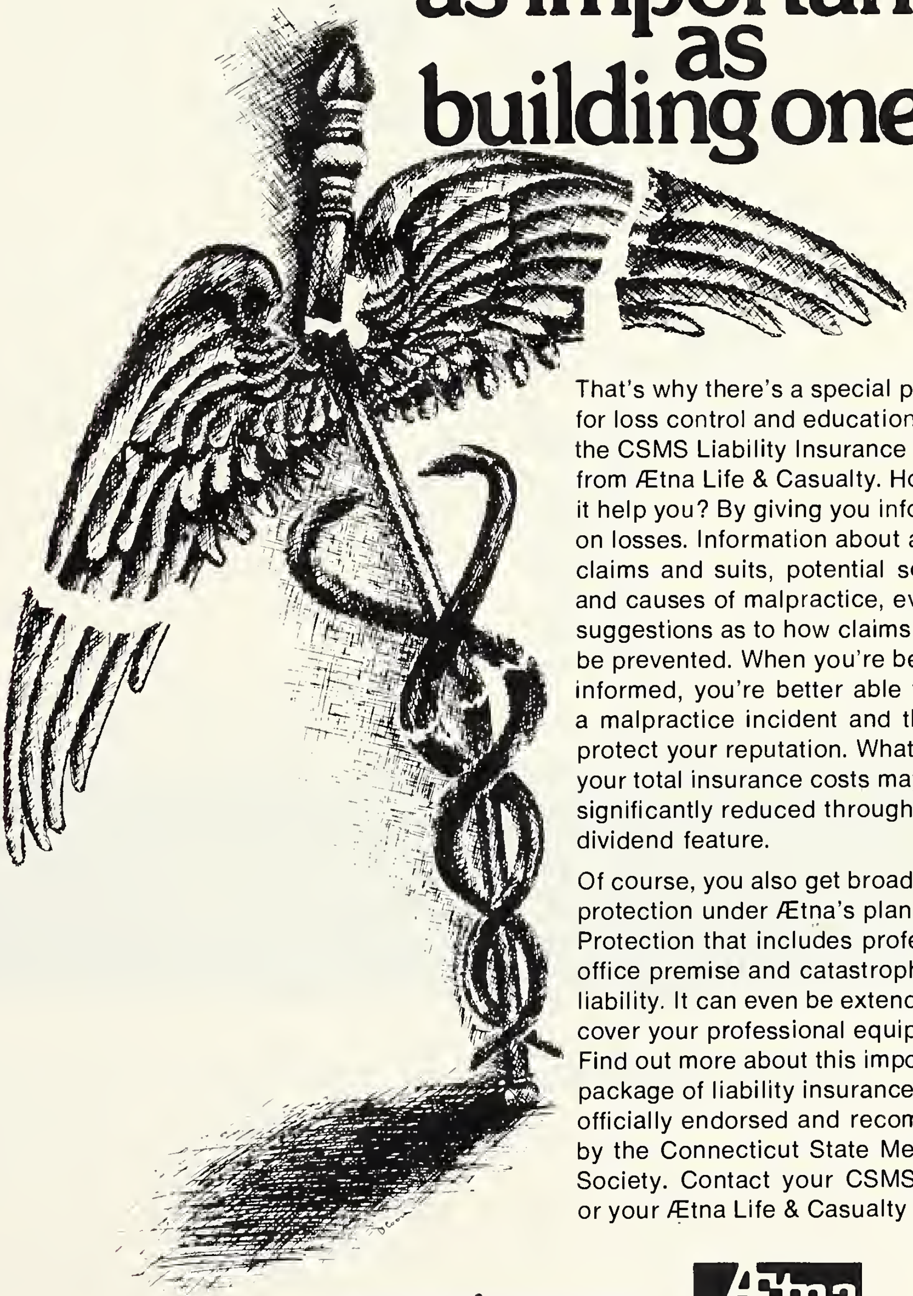

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Physicians wishing to locate in Connecticut are invited to submit a resume to be kept on file with the Physician Placement Service. Candidates are requested to inform the Society when they are no longer available for consideration for opportunities which might be available in Connecticut.

Journal announcements under "Placement Wanted" or "Placement Opportunities" will now be processed as classified advertisements. Anyone wishing to place such an announcement must submit copy by the first of the month, two months before the month of issue.

OBITUARY

Anthony Joseph Mendillo, M.D.
1886-1974

Dr. Anthony J. Mendillo, a physician and surgeon in the New Haven area for 63 years, died at his home on May 10, 1974.

He was born in Cerreto, Sannita, Italy on January 22, 1886 and was a resident of New Haven for 86 years.

He received his education at Hopkins Grammar School and at Yale Medical School, graduating with honors in the class of 1907. He started his practice of medicine and surgery in 1909 after two years of apprenticeship at the Bridgeport Hospital and New Haven Hospital. In his earlier years he practiced not only in New Haven but in the surrounding communities of the entire state.

Although Dr. Mendillo served as attending surgeon at Grace Hospital, St. Raphael's Hospital, and New Haven Hospital, his primary interest was centered at Grace Hospital the progressive development of which was his chief effort in its formative years.

Dr. Mendillo was founder member of the American Board of Surgery. He was a member of the American College of Surgeons, the International College of Surgeons, and the New York Academy of Medicine. He was also a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association.

Dr. Mendillo was a master surgeon, a technician and diagnostician of unusual ability, probably the last of that breed of surgeons who could deal with the human body as a whole rather than in part.

The warmth of his personality, his timely wit and humor, his candor, and his compassion will always be remembered by those who had the privilege of knowing him and working with him.

Dr. Mendillo, whom we now remember, has entered into the peace of life eternal and surely will live on earth in the acts of goodness he performed and in the hearts of those who cherish his memory.

Dr. Mendillo was the husband of the late Agnes Murdie Mendillo and is survived by his two daughters, Mrs. Hubert M. Greist, Jr., of Pine Orchard and Mrs. Harold DeFelice of New Haven; two sisters, Mrs. John Palumbo and Mrs. Benjamin Scarpo, of Hamden; a brother, George Mendillo of West Haven; five grandchildren, and two great grandchildren.

William D. Kaufman, M.D.

In Memoriam

Bergen, Joseph R., Tufts Medical School, 1943. Dr. Bergen was a practicing surgeon in the New Haven area since 1947. He served as chief of surgery at St. Mary's Hospital in Waterbury from 1960 to 1966, and as medical examiner from 1962 to 1965. He was a member of the New Haven County Medical Association. Dr. Bergen died May 12, 1974, at the age of 56.

Friedman, Irving, George Washington University Medical School, 1931. Dr. Bergen was the founder of Dr. Friedman's Convalescent Hospital in Colchester and had served as director of the outpatient clinic at University-McCook Memorial Hospital in Hartford, after his retirement. He was a member of the New London County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Friedman died June 11, 1974, at the age of 69

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Connecticut Medicine

The Journal of the Connecticut State Medical Society

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Clinical Experiences with Amniotic Membranes as a Temporary Biologic Dressing

Martin C. Robson, M.D. and Thomas J. Krizek, M.D.

ABSTRACT—**Temporary biologic closure of an open wound may be a therapeutic imperative. Recent experimental and pilot clinical studies have suggested renewed use of amniotic membranes as a biologic dressing. Therefore, a series of 150 cases with wounds of both traumatic and non-traumatic origin have been presented outlining the advantages of these membranes. Their ready availability, negligible cost, and apparently superior adherence and bacterial control have dictated their use on open wounds.**

Amniotic membranes have been demonstrated to be an effective biologic dressing to provide temporary coverage of open wounds.[1,2] They offer relief of pain, decrease fluid and protein loss from the wound surface, and control bacterial growth. In two different experimental models, amniotic membranes proved to be equal to autograft skin and superior to allograft and xenograft skin in decreasing bacterial counts in open granulating wounds.[3 4]

Recently, a preliminary clinical report of 50 patients was presented in which amniotic membranes had been employed as a temporary biologic wound dressing.[1] Forty-two of the patients had full-thickness wounds and the remaining eight had partial thickness wounds. At that time all full-thickness defects were covered with amniotic membranes, placing the chorionic surface against the wound and it was suggested that in partial-thickness wounds the amnion surface should be placed against the wound. However, at that time, the data were not great enough to warrant firm recommendations.

In the past two years, a sufficient number of cases has been accumulated to enable a breakdown of the cases into clinical types and discuss the specific advantages and results of using amniotic membranes as a temporary biologic dressing.

Materials and Methods

Fresh amniotic membranes were obtained from the delivery suite at the time of delivery. Only those from seronegative mothers, with no history of either endometritis or premature rupture of the membranes were used. Heavily meconium stained or foul-smelling membranes were discarded. The membranes were aseptically removed from the placenta, with no attempt being made to separate them into amnion and chorion. The membranes were then passed through four rinses of sterile saline, one rinse of 0.025 percent sodium hypochlorite solution, and an additional four rinses of saline. In each rinse, the membranes were agitated thoroughly to dislodge any clot or foreign material which might be present. After preparation, the membranes were refrigerated in individual sterile containers at 4 degrees Centigrade. The membranes were cultured prior to clinical use and routinely at weekly intervals during storage. The cultures have remained uniformly sterile. No material was used beyond six weeks of storage.

Clinical Material

A total of 150 patients with open wounds suitable for management with biologic dressings were included in the study. These included full-thickness and partial-thickness wounds as a result of elective surgery or of traumatic origin. In all cases, the amniotic membranes were placed on full-thickness defects only after all eschar had been removed from the wound. If topical antibacterials had been employed on the wounds prior to institution of biologic dressings, they were removed by immersing the patient in a Hubbard Tank.

Full-thickness and partial-thickness wounds were managed differently in regard to the amniotic membrane covering. In the former, tissue biopsies were obtained for quantitative and qualitative bacterial analyses prior to the employment of the membranes. The method of bacterial analysis has been previously described.[5] Amniotic membranes were then applied to the wound with the chorion against the granulating surface and the smooth, glistening amnion away from the wound. The membranes were changed every 48 hours. At the time of each membrane change, tissue biopsies were obtained for bacterial quantification.

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Partial-thickness wounds were handled by first cleansing the wound surface with saline and then applying the membrane with the amnion against the wound surface. The membrane was allowed to remain in place undisturbed while epithelialization progressed beneath it. The membrane spontaneously separated from the wound as epithelialization was completed.

Examples of the use of amniotic membranes as a temporary biologic dressing are as follows:

Full-Thickness Wounds

Burns: Twenty patients with burns requiring eventual coverage with split-thickness skin grafts were treated with amniotic membranes. In the patients seen with acute burns, bacterial control was seldom necessary. These patients had been treated with various topical antibacterials prior to removal of the eschar. Therefore, in this group of patients, the membranes served to keep the granulation tissue from becoming fibrotic until the entire burn wound was ready for grafting. The use of biologic dressings in this manner decreases the number of grafting procedures necessary to obtain a closed wound. In massive burns, in which the autograft supply is limited, the membranes were used while available donor sites healed.

Another group of patients with full-thickness burns was that in which the patients did not arrive at the treatment facility acutely and whose burn wound was heavily colonized by the time of arrival. If quantitative bacterial cultures revealed burn wound sepsis ($>10^5$ bacteria/gram of tissue) the eschar was debrided and the patient treated with frequent changes of amniotic membranes. In these cases, the bacterial counts rapidly decreased to acceptable levels and grafting was safely accomplished.

Electrical injuries: Three massive electrical injuries were included in this series. The extensive progressive tissue destruction seen in these injuries require that topical therapy be continued for longer periods of time. Specifically mafenide acetate (Sulfamylon®) is used to prevent colonization by clostridia of eventual gas gangrene. Once the necrotic tissue has been totally debrided, amniotic membranes were employed as in other full-thickness burns.

Delayed wound closure: Fifteen operative wounds requiring delayed closure, which had been either left open at the time of surgery or following incision and drainage of an incisional abscess were studied. During the period of preparation, amniotic membranes were used to decrease the bacterial counts of the wound as suggested by Robson and Heggers.[6] Once the bacterial count was 10^5 bacteria or fewer per gram of tissue and no streptococci were present in the wound, delayed wound closure was performed. Using biologic dressings in this way proved to be the most effective and rapid way to decrease the bacterial level in these wounds.

Leg ulcers: Twenty-one ulcers of the lower extremities have been treated with amniotic membranes. These included ulcers due to venous stasis, hypertensive ulcers, and ulcers due to vasculitis. In all categories, the membranes provided temporary coverage. In small ulcers, they kept the wounds bacteriologically clean while allowing spontaneous closure. In the larger ulcers, they were used until the wound became ready for definitive closure.

Gunshot wounds and traumatic avulsions: There were seven gunshot wounds and twelve other full-thickness avulsion wounds. In these, the use of amniotic membranes was similar to that described for full-thickness burn wounds.

Pressure sores: Eleven pressure sores or decubiti were included in the study. These are most nearly similar to the electrical injuries, since a great deal of necrotic tissue is often present. There is no role for any biologic dressing until all necrotic tissue has been removed from the wound either by sharp or enzymatic debridement.

Partial-Thickness Wounds

Burns: Although nine partial-thickness burns were initially treated with amniotic membranes, this is no longer our practice. The thermal injury often results in a non-uniform wound with necrotic tissue or patchy areas of partial and full-thickness loss. The presence of eschar, even in small areas, prevents biologic union of the membrane with underlying tissue and may, indeed, predispose to local wound sepsis.

Donor sites: As opposed to partial thickness burns, a donor site from a split-thickness skin graft is a fairly uniform wound and rarely contains areas of full-thickness loss. Amniotic membranes placed with the amnion side against the wound, result in a painless donor site, which epithelializes undisturbed beneath the membrane. Twenty-seven such cases have been included in the present experience.

Dermabrasion: A wound similar to a donor site is that produced after dermabrasion. Therefore, fourteen patients have had amniotic membranes placed amnion side against the wound as their only postoperative dressing following dermabrasion.

Miscellaneous

There were eleven additional cases in which amniotic membranes have been used which do not fit into the above categories. Examples of these are a newborn infant with a large omphalocoele which was treated with porcine xenografts and amniotic membranes while the child grew sufficiently to allow closure. Another was its use as a temporary dressing in a man with a basal cell carcinoma covering his entire scalp. This granulating, draining tumor mass was treated with amniotic membranes, changed every 48 hours, while a multiple-staged pedicle flap was prepared to resurface the eventual operative defect.

Discussion

The concept of temporary biologic dressings for use on the burn wound has been well accepted since popularized by Brown and his associates.[7 8] The embryologic and histologic similarities between skin and human amniotic membranes has been documented. Previous work by Sterling, Pigeon, and Douglas, *et al.* has substantiated their potential use in open wounds.[2 9 10] In our experience in both the experimental animal and in clinical cases, they have proved equal to or superior to, other available biologic dressings. Comparisons between amniotic membranes and allograft and xenograft skin can be seen in Table 1. All decrease pain from the open wound. All control heat loss and fluid loss from the wound surface. Although the exact amount of protein loss employing amniotic membranes has not been measured as exactly as with the other biologic dressing, it is presumed to be equally effective. Amniotic membranes adhere better than xenografts. Amniotic membranes are more readily available in the general hospital than allografts and according to Baxter's figures are less expensive.[11] The ability to decrease bacterial counts has been equal to allografts and superior to xenografts. Because of the various advantages listed, a large series has been presented outlining the various uses of amniotic membranes as a temporary biologic dressing.

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TABLE 1
COMPARISON OF PROPERTIES OF AVAILABLE BIOLOGIC DRESSINGS

	Amniotic Membranes	*Allograft*	*Xenograft*
Patient Comfort	4+	4+	4+
Control Protein Loss	?(4+)	4+	4+
Adherence	4+	4+	2+
Availability	Ready	Limited	Ready
Cost	0	$225/Patient	$20/Sq. Ft.
Bacterial Control	4+	4+	2+

Retropharyngeal Swelling of Unexpected Etiologies

Report of Two Cases

K.J. Lee, M.D., William Fidler, M.D., James Kelly, M.D., Eiji Yanagisawa, M.D., and Leonard Hays, M.D.

Abstract—This is the report of two cases of retropharyngeal swelling, the final diagnoses of which were not anticipated. The first case was an angiomatous lymphoid hamartoma in the retropharyngeal-parapharyngeal region, the first reported case of this tumor in this anatomical area. The second case is that of a 20 year old Caucasian-Korean male whose retropharyngeal symptoms of severe neck splinting, pain and dysphagia occurred after a major automobile accident. He had swelling of the retropharyngeal space associated with a calcified stylohyoid ligament. On biopsy he proved to have epidermoid carcinoma of the nasopharynx submucosally.

Introduction

Retropharyngeal swelling is by no means a rare clinical finding in the practice of an otolaryngologist. The differential diagnosis for this clinical sign includes (a) retropharyngeal abscess (b) benign neurogenic tumor[1] (c) leiomyoma (d) fibrosarcoma[2] (e) nasopharyngeal carcinoma (f) lymphoma (g) retropharyngeal and parapharyngeal extension of parotid tumor.[3] Obviously, the order of priority in this list of differential diagnoses depends on other signs and symptoms besides the racial background of the patient.

This paper reports two patients with retropharyngeal swelling whose final pathological diagnosis were not anticipated. The first patient had an angiomatous lymphoid hamartoma, the first reported case of this tumor in the retropharyngeal-parapharyngeal site. The second case reports a 20 year old Caucasian-Korean male with nasopharyngeal carcinoma. His retropharyngeal symptoms presented after an automobile accident in which the diagnosis of cervical fracture with retropharyngeal hematoma was entertained.

Anatomy

Levitt[4] in his dissertation described the retropharyngeal space as that space behind the hypopharynx and the esophagus which extends from the base of the skull to the superior mediastinum. It lies between the middle layer and the alar layer of the deep cervical fascia. Behind this space are what he called the danger and the prevertebral spaces.

Anterolaterally, the retropharyngeal space communicates with the parapharyngeal or pharyngomaxillary space. The parapharyngeal space is bounded superiorly by the base of the skull along the sphenoid bone, inferiorly by the hyoid bone, anteriorly by the pterygomandibular raphe and posteriorly by the prevertebral fascia. This space between the lateral pharyngeal wall and the ramus of the mandible, is divided into the anterior and posterior compartments by the styloid process. The anterior compartment containing no vital structures is in close proximity medially with the tonsillar fossa and laterally with the internal pterygoid muscle. The carotid sheath, IX, X, XI, and XII cranial nerves are in the posterior compartment.

Case I

J. W. is a 16 year old Negro male who was first seen in the Otolaryngology Clinic in November 1969. He was referred for an asymptomatic papilloma of the uvula. A 1.5 cm soft submucosal mass was noted in the right retropharyngeal area at that time. Close follow-up was recommended, but the patient did not return until February of 1971, at which time he was seen for recurrent epistaxis which had been present for a year. Examination at that time showed an area of vascularity in the right anterior septum and a right posterior pharyngeal, smooth submucosal mass, which was non pulsatile. There was no ulceration or exophytic lesion. X-ray of the neck showed a soft tissue mass in the right retropharyngeal-parapharyngeal area. The parotid sialogram was normal. The epistaxis was treated successfully with cautery. He was admitted to the hospital on June 4, 1971 for examination under anesthesia as well as a right carotid arteriogram. A large submucosal mass was found filling the entire right retropharyngeal and parapharyngeal space. The right carotid arteriogram indicated a nonvascular

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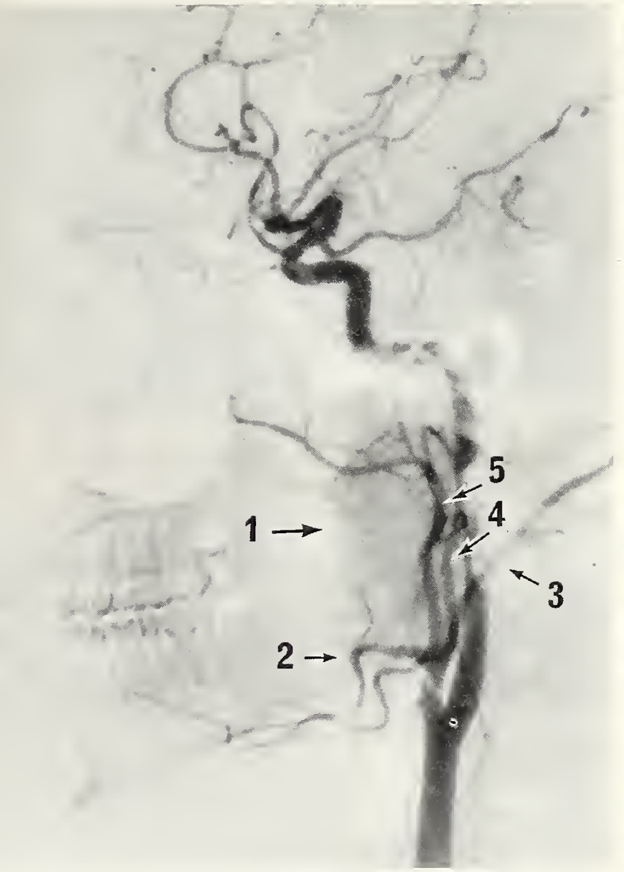

Figure 1
Subtraction Carotid Angiography

1-Tumor Outline
2-Facial Artery
3-Occipital Artery
4-Ascending Pharyngeal Artery
5-Internal Maxillary Artery

tumor receiving its nutrient supply from the internal maxillary artery and ascending pharyngeal artery. Figures 1 & 2 illustrate the subtraction studies depicting the tumor and its blood supply. The patient was readmitted to the hospital on July 12 for resection of the tumor through a right mandibulotomy and lateral pharyngotomy approach. At the time of operation a large tumor of approximately 10 cm occupied most of the right retropharyngeal and parapharyngeal space, displacing the right tonsillar fossa medially and the palate inferiorly. The mass, immediately medial and inferior to the internal carotid artery, displaced the vessels laterally. It extended to the base of the skull and was deep to the styloid process, digastric tendon and hypoglossal nerve. This well-encapsulated tumor was excised completely. The postoperative course was uneventful and the patient was discharged on the 16th postoperative day. There is no evidence of recurrence to this date.

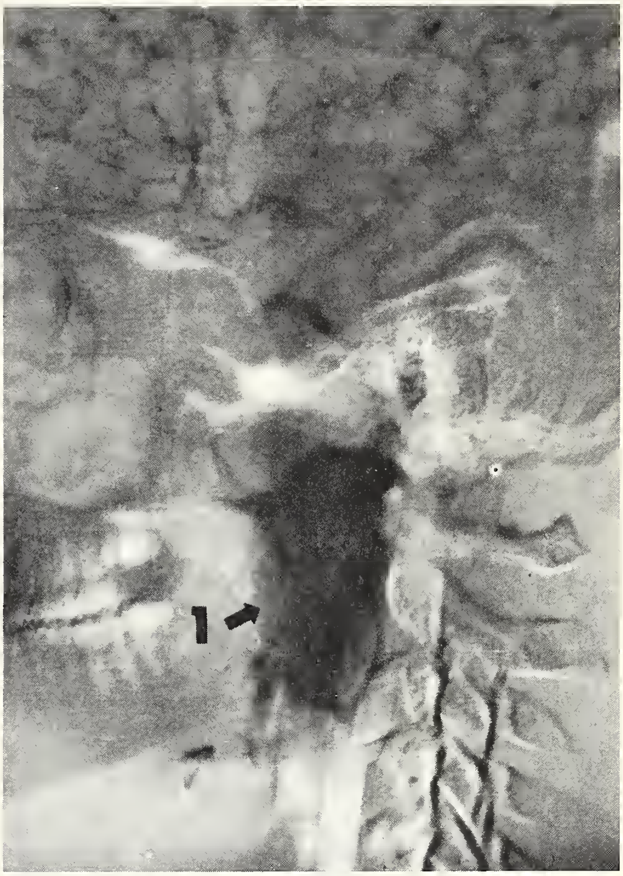

Figure 2
Subtraction carotid angiography illustrating the "blush" of the tumor.

Pathology

The specimen was a 7 x 4 x 3 cm yellow-grey, rubbery encapsulated mass. The cut surface was slightly nodular (Fig. 3). Microscopically the lesion was characterized by lymphoreticular nodules and proliferation of capillaries between the nodules (Fig. 4). Thick fibrous trabeculae with large blood vessels in their centers traversed the lesion. Most of these had a large blood vessel in its center. These vessels probably accounted for the vascularity seen on the arteriogram subtraction studies.

The nodules contained a central zone of whorled cells which often had eosinophilic hyaline material around them. Lymphocytes were arranged in concentric rings around the central zone (Fig. 5). In some nodules, blood vessels could be seen radiating from the central zone (Fig. 6). The stroma between the nodules consisted of a prominent vascular bed with plump endothelial cells with a mixture of lymphocytes, a few plasma cells and rare eosinophils. Reed-Sternberg cells were not seen. The mass had a fibrous capsule and a few normal hyperplastic lymphoid follicles. The diagnosis was angiomatous lymphoid hamartoma.

Discussion

In recent years a distinctive benign lesion of lymphoid tissue has been recognized with increasing frequency. Because its etiology is unknown, a variety of names has been given to it. Among the most common names are lymphoid hamartoma,[5] angiomatous lymphoid hamartoma,[6] giant lymph

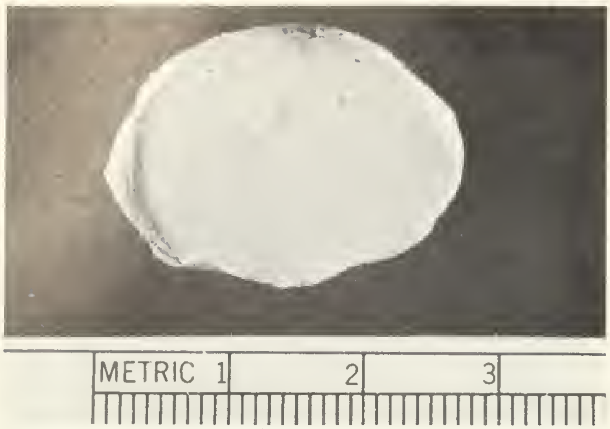

Figure 3
Cut surface of angiomatous lymphoid hamartoma. Note slight nodularity.

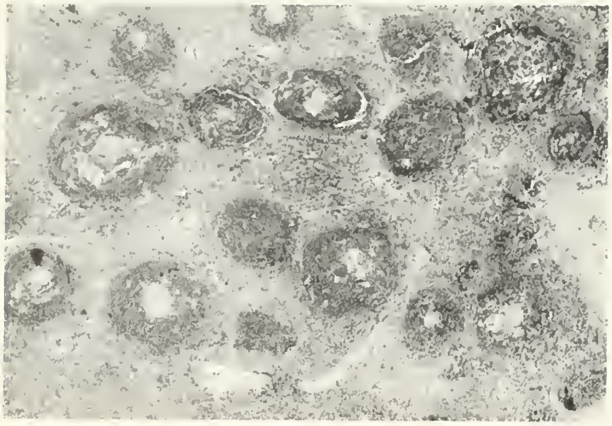

Figure 4
Angiomatous lymphoid hamartoma. Lymphoreticular nodules throughout lesion (H & E Stain x 58).

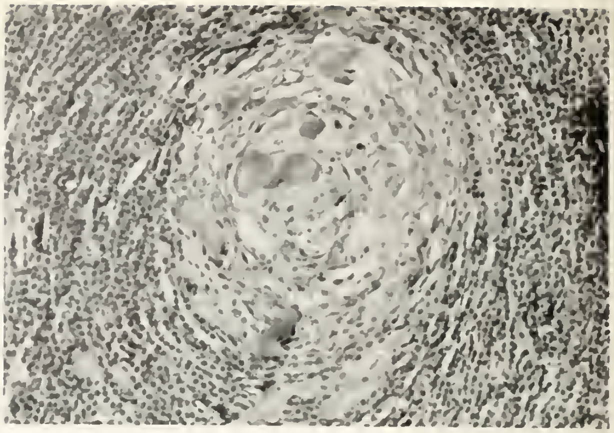

Figure 5
Hyaline material in center of nodule with lymphocytes at periphery (H & E Stain x 160).

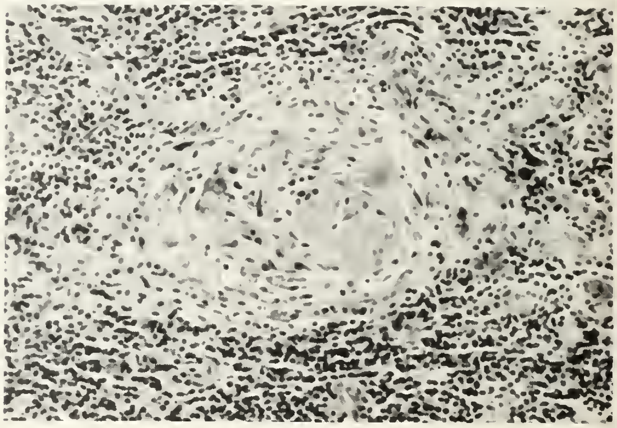

Figure 6
Blood vessels radiating from central portion of nodule (H & E Stain x 160).

node hyperplasia,[7] and angiofollicular lymph-node hyperplasia.[8] Although the majority of these lesions are located in the mediastinum and hilum of the lungs, at least 16 have been located in the cervical region[5, 7, 9, 10, 11, 12] and one in the larynx.[13]

The lesions in the mediastinum and hilum have been found incidentally on chest x-rays, although a few patients had chronic cough or a pressure sensation in the chest. Neck lesions have presented as painless isolated masses. All have been located lateral to the carotid artery or in the supraclavicular area. The laryngeal lesion caused hoarseness.

Most lesions are discovered in the second, third and fourth decades of life. There is no sex or race predilection.

Several theories on the etiology of this lesion have been proposed though none have been proven. Older reports discussed its relation to thymoma because of the mediastinal location and the resemblance of the hyalinized centers to Hassell's corpuscles.[14, 15, 16] However, the rare occurrence of Hassell's corpuscles in thymomas, the lack of keratin in the hyalinized centers, and the occurrence of lesions in the abdomen, groin, axilla and skeletal muscle contest the idea of their being of thymic origin.

The vascular hyperplasia and lymphoid tissue have influenced authors[11] to consider these lesions to be giant hemolymph nodes. However, the lack of resemblance to animal hemolymph nodes and the uncertain existence of hemolymph nodes in man have discredited this idea.

Several authors[5, 6, 10] who consider these lesions to be hamartomas cited: (1) the predominant occurrence in adolescents and young adults, (2) the composition of lymphocytes, reticulum cells, blood vessels and fibrous tissue, (3) the lack of lymph node sinuses at the edge of lesions, and (4) the normal or hyperplastic nodal tissue adjacent to the lesion, as evidence of their hamartomatous nature. However, the lesions have not been shown to be familial or congenital as is frequently the case with hamartomas[17]. Some have been shown to develop after previous negative x-ray.[7]

Finally, many authors[7 8 15] believe these masses to be hyperplastic lymph nodes of infectious or inflammatory etiology. Some lesions had hyperplastic lymphoid follicles in them. The interfollicular stroma contains histologic evidence of inflammation, i.e., plasma cells, eosinophils, and a variable number of reticular lymphoblasts. In addition, a small number of patients have a predominance of plasma cells in the lesion. These patients had symptoms of fever, anemia and hyperglobulinemia, which are suggestive of an infectious or inflammatory etiology.

More important, several of these benign lesions have been misinterpreted as Hodgkin's disease or follicular lymphoma. The lack of Reed-Sternberg cells and the composition of the nodules should rule out these diagnoses.

Complete surgical excision is the treatment of choice. Most lesions have been removed easily since they are encapsulated. A few have caused excessive bleeding. Radiotherapy in a small number of cases of incomplete removal has resulted in little or no decrease in size.

Case II

J.H. is a 20 year-old half-Caucasian, half-Korean male who was admitted to the Neurosurgery and Orthopedic Services on January 18, 1972 following a car accident because of (a) questionable loss of consciousness, (b) right acetabular fracture, (c) right 8th and 9th rib fractures, (d) right ischial ramus fracture, (e) perivesical hematoma, (f) questionable C^1 fracture.

Family history revealed the patient to be the product of a Korean mother and a Caucasian father. There was no Chinese ancestry in the family. No family history of malignancy was known to the patient nor was he exposed to incense burning in the household. This patient was born in Korea and moved to the United States at the age of 8. He has not been outside this country since except for a tour of duty in South Vietnam from October 1970 to September 1971.

Past medical history disclosed no recollection of tonsillitis as a child or in high school. This patient had two episodes of sore throat diagnosed as tonsillitis while in South Vietnam and was treated successfully with Ampicillin. In November 1971, he underwent tonsillectomy, the pathological diagnosis of which was chronic tonsillitis with no evidence of malignancy. No retropharyngeal or nasopharyngeal swelling was noted by the surgeon at the time of tonsillectomy.

Ten weeks post tonsillectomy, the front tire of his car ruptured on the highway and involved him in a major accident. Hence, he was admitted to the hospital with the above mentioned diagnoses. At the time of admission, his temperature was 97.6, pulse 104, and blood pressure 100/70. No trismus, dysphagia, or cervical lymphadenopathy were present. Because of abdominal symptoms suggestive of G.I. or spleen injury, a nasogastric tube was introduced from January 18 to January 22. The patient was treated by the Orthopedic Service and did satisfactorily until January 28 when he developed a fever of 101.8 degrees. Complete fever work-up with the help of the Infectious Disease Consult was unrevealing. The Ampicillin which he had been receiving since the day of admission for his multiple injuries was discontinued on January 28 and replaced by Keflin. His temperature dropped to 99 degrees on February 1 for the next 10 days, but only to rise to 103°. Due to fever of undetermined origin, increasing neck splinting and sore throat, ENT Consultation was obtained. ENT examination revealed a toxic individual with swelling of the left retropharyngeal area with marked tenderness, but without fluctuation. The patient had marked trismus and dysphagia. Bilateral jugulodigastric submaxillary and subparotid tender lymphadenopathy was noted. There was no serous effusion in the ears. His WBC was 17,300 with a shift to the left, suggestive of an infectious process. Earlier radiographic studies tended to rule out cervical fracture; however, x-rays taken on February 10 showed a thickening of the soft tissue space in the retropharyngeal area (Fig. 7) with calcified fragments. The differential diagnosis of cervical fracture or calcified stylohyoid ligament was entertained. On February 18, 1972, examination under general anesthesia by the ENT Service confirmed the above findings. The posterior pharynx felt firm with no exophytic mass or mucosal disease. I and D revealed no hematoma or abscess formation. As symptoms, temperature of 103° and a highly toxic appearance persisted, he was re-examined under general anesthesia on February 23. Similar findings were noted. Submucosal firmness was present in the retropharyngeal space, more on the left. There was no exophytic lesion in the roof, floor, lateral or posterior walls of the nasopharynx. A vertical mucosal incision was made on the posterior wall of the nasopharynx which disclosed no abscess or hematoma. Biopsy revealed undifferentiated epidermoid carcinoma. Tomography did not demonstrate invasion of the base of the skull or the sphenoid sinus. There was no nasal obstruction, serous otitis or cranial nerve involvement. The patient had bilateral rapidly enlarging jugulodigastric, submaxillary and subparotid nodes. Within a week of

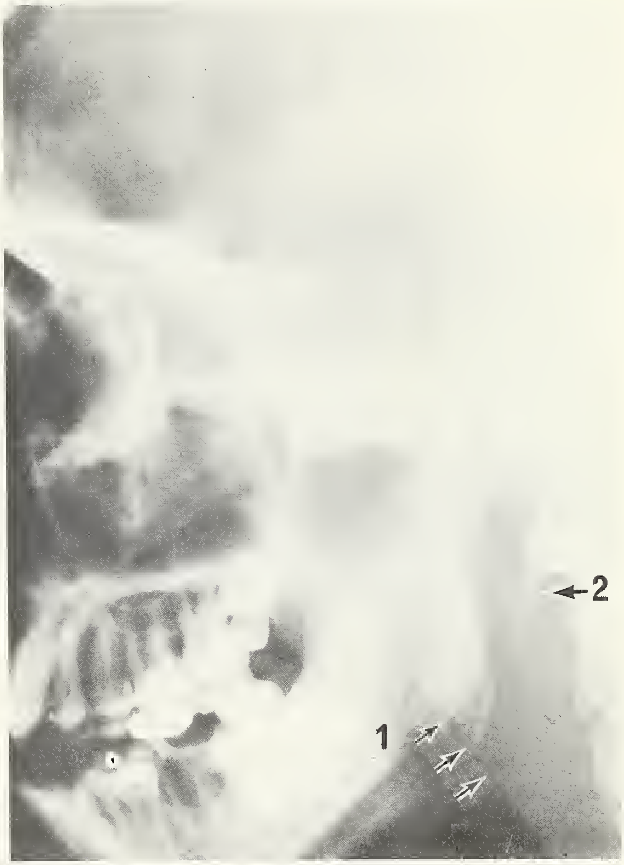

Figure 7

Lateral view, illustrating retropharyngeal swelling (1) and calcified stylohyoid ligament (2).

radiation therapy, he became afebrile, oriented, lost his toxic appearance and had minimal dysphagia with no trimus. His lymphadenopathy and retropharyngeal area subsided considerably within the same period of time. He received a total of 6000 r. He was examined under general anesthesia 6 months after completion of radio-therapy and no residual tumor was noted. He returned 13 months after the diagnosis was made with diffuse bony metastasis. He died of metastasis and dehydration on March 10, 1973.

Pathology

The biopsy showed sheets and cords of epithelial cells with clear cytoplasm and indistinct borders. There were lymphocytes scattered among the neoplastic cells (Fig. 8). The diagnosis was poorly differentiated epidermoid carcinoma (lymphoepithelioma). Review of the slides from the previous tonsillectomy showed lymphoid hyperplasia, with no evidence of neoplasm.

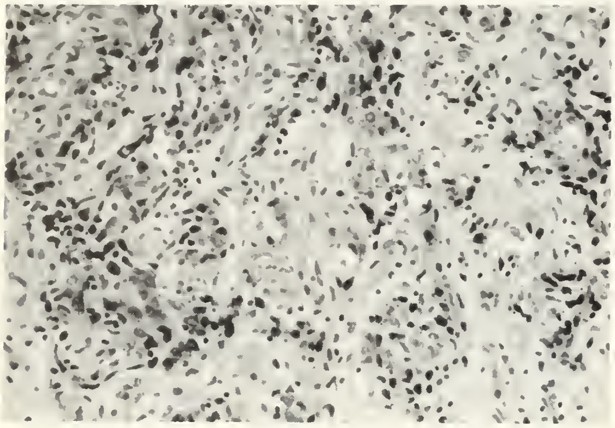

Figure 8

Poorly differentiated epidermoid carcinoma with lymphocytes in the neoplasm (H & E Stain x 160).

Discussion

Nasopharyngeal carcinoma has been estimated to constitute 0.25% of all malignant tumors in any white population.[18] Choa[19] and Yeh[20] estimated this to be 25 times higher in South China, Hong Kong and Formosa. Laing[21] stated that nasopharyngeal carcinoma constituted 15% of the deaths from all cases of malignant disease in Hong Kong. He also reported 12 cases in the 10-19 age group. Hara[22] observed that less than 0.3% of all malignancies in the western world is due to nasopharyngeal carcinoma. He concurred with the significant increase in incidence among the Chinese, especially those born in the Kwantung Province of China. The Japanese, though belonging to the same ethnic group have an incidence rate comparable to that of the western countries.[21] None of these authors mentioned the incidence in Koreans. Miller et al[23] reported abnormally high anti E-B virus antibody levels in patients with nasopharyngeal carcinoma.

Our patient is a 20 year-old half-Korean and half-Caucasian male who spent 11 months in South Vietnam. His case is of interest in that his signs and symptoms of severe neck splinting, dysphagia, and lymphadenopathy were associated with a toxic course and appeared after a major automobile accident. Lateral neck x-ray demonstrated increased retropharyngeal soft tissue density and thickness as well as calcified stylohyoid ligament. His clinical course was more indicative of a retropharyngeal infection secondary to trauma and possible cervical fracture. Since no hematoma or abscess was identified, a biopsy was performed revealing poorly differentiated epidermoid carcinoma. The tumor was completely submucosal. When in doubt, a patient with nasopharyngeal or retropharyngeal swelling should be examined under general anesthesia and biopsied to rule out the remote possibility of malignant neoplasm. New[24] in his study of 194 patients with malignant lesions of the nasopharynx remarked that 185 operations were performed before the diagnosis was established. These included trephine of the sinuses, removal of nasal polyp and turbinates, mastoidectomies, myringotomies, alcohol injection and teeth extractions.

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Massive Gastrointestinal Hemorrhage from a Carcinoid Tumor of the Ileum

Report of a Case

Richard E. Burney, M.D., and John E. Standard, M.D.

ABSTRACT—A case of acute, massive gastrointestinal hemorrhage resulting from ulceration of a carcinoid tumor of the ileum is described. This diagnosis should be considered in cases of unusual or unexplained gastrointestinal bleeding and the appropriate, careful search made for such a lesion at exploratory surgery.

Carcinoid tumors may occur anywhere in the gastrointestinal tract, but are most frequently found in the ileum. Current investigations have documented both their malignant potential and their unusual endocrine properties.[1 2] Most often these tumors are asymptomatic, a high percentage being found incidentally at autopsy.[3 4] The most common symptom of carcinoid tumor of the ileum is pain, with symptoms of partial small bowel obstruction second in frequency.[5] Occult gastrointestinal bleeding is a rare presenting symptom;[5 6] acute, massive hemorrhage is even more rare, but may occur.[7 8 9 10] We would like to present such a case.

Case Report

J. G., a 71-year old retired insurance executive, was admitted to the Waterbury Hospital on the morning of April 11, 1972, with the chief complaint of passing bloody stools and dizziness. He had been awakened from his sleep three times to pass first tarry, then on two occasions, maroon, liquid stools. The subsequent onset of dizziness caused him to seek immediate medical attention.

The patient had a history of hypertension and cardiomegaly, and had been taking digoxin, 0.25 mg., daily as his only medication. Once told he had "colitis," he denied recent symptoms of diarrhea or urgency. In addition, he denied hematemesis, abdominal pain, cramps, change in bowel habits, nausea, vomiting, weight loss or fever. A hemorrhoidectomy had been performed in 1957, cholecystectomy in 1965, and suprapubic prostatectomy in 1967, all without major complication. There was no history of peptic ulcer disease, hemorrhagic diathesis, or aspirin ingestion.

Physical examination on admission revealed an alert, elderly appearing male with blood pressure 160/80 supine, falling to 130/60 erect. Pulse was 120/min. and regular. There was no jaundice or other stigma of liver disease. A soft, apical systolic murmur was present, and the left border of cardiac dullness was well to the left of the mid-clavicular line. The abdomen had well healed upper and lower abdominal incisional scars, and was soft, with active bowel sounds. Mild tenderness could be elicited in the right gutter area but no masses were felt. Rectal exam disclosed grossly bloody stool. A nasogastric aspirate was negative for gross blood, but reported 1+ guaiac positive by the clinical laboratory.

Admission laboratory studies revealed an hematocrit of 32% and a BUN of 34 mg %. Chest film confirmed moderate cardiomegaly. Transfusions of whole blood and packed cells were begun. On the day of admission emergency upper gastrointestinal series and barium enema were within normal limits, as was sigmoidoscopy. Additional blood transfusions were

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Figure 1

Photomicrograph showing ulceration of mucosa overlying carcinoid tumor.

required on the second hospital day. A selective superior mesenteric arteriogram failed to pinpoint the site of bleeding. On the third hospital day, after nine units of blood had been required and active rectal bleeding persisted, abdominal exploration was undertaken.

The stomach, pylorus, and duodenum were normal in appearance. Gross blood was present in the mid-ileum, throughout the remainder of the small bowel, and in the colon. Careful palpation of the small bowel disclosed a one centimeter tumor mass on the antimesenteric border of the mid-ileum, causing visible kinking of the bowel wall at that point. Segmental resection was carried out. The opened specimen contained a firm, submucosal tumor with a shallow ulceration at its center. Frozen section diagnosis was compatible with carcinoid tumor, and permanent sections later confirmed this interpretation. Resection of a wider area of small bowel and mesentery was carried out. Careful inspection failed to reveal additional lesions or evidence of metastasis.

Post-operative convalescence was uneventful. A 24-hour urine collection for 5-HIAA was negative. The patient's hypertension was unchanged. He was discharged home on the ninth post-operative day.

Discussion

Mann and Simpson[6] have reported on a patient who had seven episodes of melena over a five-year period from a carcinoid tumor of the ileum. More massive, acute hemorrhage has been described in four case reports.[7 8 9 10] The first of these[7] closely resembles the case of Mann and Simpson, with three episodes of melena or gross rectal bleeding being noted over a two-year period. Barium enema and upper gastrointestinal examinations were negative on two occasions, but at exploration seven small carcinoid tumors were found within a 26 cm. segment of ileum.

In the second report[8] peptic ulcer was suspected preoperatively because of reported duodenal deformities seen on upper gastrointestinal series. When the duodenum appeared normal at operation, however, additional exploration disclosed the small bowel tumor. The last two cases[9 10] resemble ours more closely, with the standard diagnostic work-up again affording little in the way of positive information.

In the absence of carcinoid syndrome, the preoperative diagnosis of ileal carcinoid is difficult and frustrating. Barium studies of the large and small bowel were performed in five of the six cases discussed herein, were non-diagnostic in five, and misleading in one. In our institution both gastric endoscopy and colonoscopy were available, but in the face of apparent continuing active bleeding, we preferred to try to identify the site of hemorrhage by arteriography. The failure of this maneuver to reveal a bleeding point or vascular lesion was disappointing. Possible explanations, the small size of the tumor and the lack of infiltration of the mesentery,[11] do not aid one in devising practical solutions to the diagnostic problem.

At operation the only outwardly visible indication of an abnormality of the small bowel was the indentation or "kinking" of the bowel at the site of the tumor. This finding is not consistently described by other authors and does not appear to be a reliable guide to the presence of such a lesion. Only careful, methodical palpation of the small bowel will identify an occult carcinoid. This discussion serves to reemphasize the importance of such a search when one confronts gastrointestinal bleeding of undetermined origin.

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Gastric Polypectomy Via the Panendoscope

Vincent A. DeLuca, Jr., M.D., and Bernard S. Shapiro, M.D.

Fiberoptic endoscopy has been used for the past ten years primarily as a diagnostic instrument.[1] Removal of polyps via the colonoscopy has shown that the fiberoptic endoscope can serve therapeutic as well as diagnostic purposes.[2,3] The following two cases illustrate that the same technique for removing polyps from the colon with the colonoscope can be applied to gastric polypectomy with the panendoscope.

Case 1—A 59-year-old white female presented with a one year history of vague substernal distress associated with eating. A GI series demonstrated an antral filling defect consistent with a polyp measuring 1.5 cm. in diameter (Fig. 1). On examination the patient revealed increased PA diameter of the chest with expiratory wheezing. Blood pressure was 140/90. Electrocardiograms were consistent with myocardial ischemia. The patient was a poor risk for laparotomy.

Endoscopy with polypectomy was undertaken. The esophagus and duodenum were normal but the stomach revealed a nodular, vascular appearing polyp distal to the angulus measuring 1.5 cm. in diameter. The electrosnare instrument was inserted into the biopsy channel and polypectomy was performed. The polyp fell into the dependent portion of the stomach (mucus lake area). Subsequently the polyp was sucked against the tip of the instrument and drawn out of the stomach. A few cc's of blood was demonstrated in the stomach and no bleeding was noted from the polyp excision site. Pathology examination demonstrated an inflammatory gastric polyp.

Case 2—A 72-year-old white woman had complained of nausea and vague abdominal distress and anorexia of a few weeks duration. An upper GI series revealed a 1.5 cm. filling defect in the body of the stomach (Fig. 2). She had a longstanding history of hypertension and an episode of cerebral vascular insufficiency one year before. Examination revealed a cooperative, elderly female with no significant physical findings and a blood pressure of 168/80. An augmented histamine test revealed a BAO of 0.3 mqv. per liter and an MAO of 7.0 mqv. per liter, consistent with low acid output. An Olympus panendoscope was passed and a normal esophagus and duodenum were seen. The stomach revealed a prominent vasculature of the anterior wall consistent with atrophic gastritis. On the posterior wall of the antrum a rigid, protruding broad-based polyp measuring 1 cm. was visualized and removed by the technique described in Case 1, with no evident bleeding. Pathology revealed a 1 cm. adenomatous polyp. A repeat GI series two months later was negative.

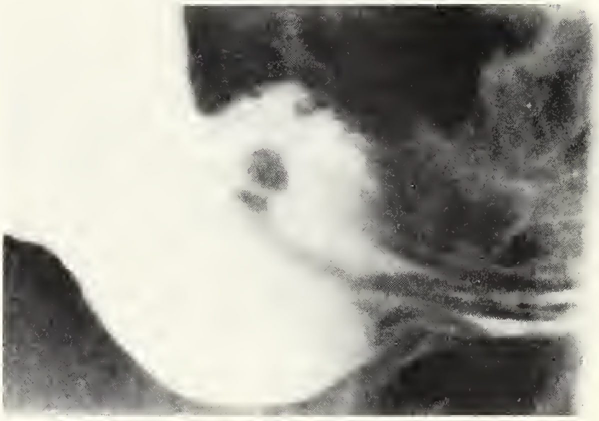

Figure 1

Barium X-Ray revealing a 1.5 cm. filling defect in the antrum of the stomach.

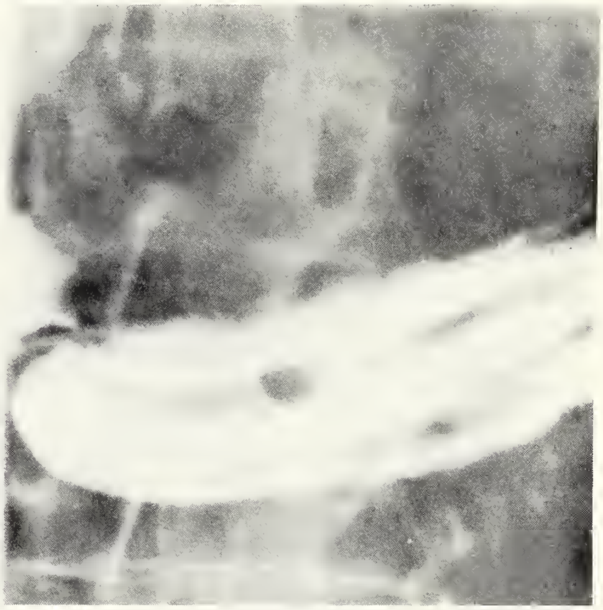

Figure 2

Barium X-Ray revealing a 1.5 cm. filling defect in the body of the stomach.

Discussion

These two cases show how gastric polypectomy can be performed via the panendoscope successfully and without morbidity. Recent brief reports have described a similar experience in performing gastric polypectomy through the gastroscope.[4,5,6] By avoiding abdominal surgery the technique reduces the morbidity and cost of gastric polypectomy. The relative infrequency of adenomatous polyps in the stomach as compared to the colon[7] suggests that polypectomy via the panendoscope will be performed less frequently than with the colonoscope.

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Panendoscopy has the additional advantage over laparotomy in allowing a thorough evaluation of the esophagus, stomach and duodenum at the time of polypectomy in addition to allowing performance of cytology, biopsy and photography.[8]

Conclusion

The panendoscope traditionally serves as a diagnostic instrument of the upper GI tract, but in addition can be used for the removal of polyps from these organs by use of the snare cautery device.

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Evaluation of a New Anorexic Agent in Adolescence

Humberto P. Bauta, M.D.

Introduction

Nutritional problems have become significant in the American adolescent population. Not only are children from low economic levels affected but so are those from high-income families. For both ethnic and economic reasons poor eating habits have developed. Associated with these poor eating habits and the resulting obesity is the development of many diseases which can affect the adult who continues to remain obese from childhood. Parental guidance, physician instruction, and proper exercise are most important as preventive measures. If it is at all possible to control obesity in the adolescent, it may be a step toward controlling adult obesity. Some patients need assistance which may be in the form of appetite-suppressant drugs with minimal development of tolerance or abuse. As amphetamines are increasingly limited in use, other pharmacological agents will be needed.

Mazindol* is a new compound: chemically, it is 5-p-chloro-phenyl-5-hydroxy-2, 3-dihydro-5H-imidazo (2, 1-a) isoindole. Its structure is shown in Figure 1. It has been found to be an effective anorectic agent in rats, dogs, monkeys, and man. Studies suggest that tolerance does not develop to this compound in the rat.[3,4,5] Mazindol is less potent than amphetamines as a psychostimulant and pressor agent and is a weak ganglionic blocker producing hypoglycemia in chicks, but has no effect on blood sugar and free fatty acids of rats.[4,5] These studies indicate facilitation of paradoxical sleep at low doses and septal-induced electrical activity at high doses, markedly differentiating this compound from the other anorexiants.[4] With chronic administration in man a decrease in fasting blood glucose, plasma cholesterol, and triglyceride levels was seen, but no significant changes in free fatty acids and acetoacetate were noted.[7,8]

Based on the reports in adults and animals and the need for new aids in developing proper nutritional habits for adolescent children, it was decided to conduct a double-blind study to determine the safety, efficacy, and tolerance of mazindol as compared to placebo in outpatient adolescents with exogenous obesity. Efficacy was measured in terms of weight loss and reduction in two skinfold measurements. Safety was assessed in terms of change in vital signs, physical examination, laboratory evaluations, and adverse reactions encountered during the study.

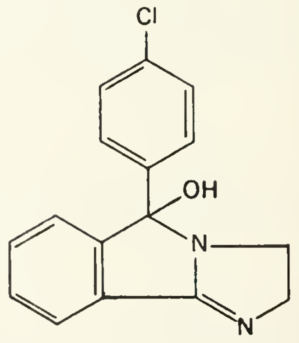

Figure 1
Chemical structure of Mazindol

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**Sanorex®, Sandoz Pharmaceuticals, East Hanover, N.J.*

Materials and Methods

Forty patients in the age range of 12 to 18 years, with exogenous obesity but otherwise in good health, were selected for the study. All the patients were at least one standard deviation above the mean in weight for their height and age (Iowa Scale). Patients who were not motivated to lose weight, who had a history of emotional instability, who required any significant concomitant medication, or who had any clinical disease or condition which might interfere with proper evaluation of the drug were not included in this study. Also, patients who had been on weight-reduction medication within three weeks of admission to the study were not included.

Study medications evaluated were identically appearing tablets containing mazindol 2.0 mg. or placebo (pharmacologically inert). Medications were assigned to patients by a randomization procedure.[6] A double-blind experimental design was used. Patients were required to return every two weeks for evaluation and a new supply of medication. The latter was taken for 12 weeks on a fixed-dosage schedule of one tablet one hour before the noon meal.

A low-calorie diet was prescribed at the initial visit and patients were instructed to remain on it for the entire 12 weeks of the study. Deviations from this diet were permitted but were to be noted. All patients were evaluated at the initial visit, at which time background information was obtained and physical examinations, clinical (vital signs) and laboratory (CBC, BUN, FBS, cholesterol, PBI, alkaline phosphatase, bilirubin and urinalysis) evaluations, as well as skinfold measurements were performed. They were instructed regarding diet, plan and duration of the study, were assigned their patient numbers, and were given bottle number one of the set of six bottles.

Evaluations made at the end of each two-week period throughout the 12-week study were: body weight, temperature, supine and standing systolic and diastolic blood pressure and pulse, food consumption, degree of appetite, and any side effects. Additional evaluations were made at weeks 6 and 12. These included a complete physical examination, skinfold measurements (triceps and subscapular), and laboratory batteries. Plasma 17-hydroxysteroids and 17-ketosteroids were determined at the initial visit and week 12.

Results

Seventeen (17) patients were excluded from the statistical analysis: 10 of these were dropouts (non-drug related), and 7 were due either to deviation from the medication schedule or owing to insufficient overweight.

Twenty-three patients (12 on mazindol and 11 on placebo) completed the 12-week course of treatment and evaluation in accordance with the protocol and consequently were included in the analysis. The background characteristics of the population are summarized in Table I. The drug and placebo groups were comparable in regard to these characteristics.

The results of the statistical analysis of the efficacy parameters were as follows:

1) Body weight loss for the mazindol group was statistically significant at each time point as compared to week 0. At the end of 12 weeks, the average changes in body weight were -13.8 lbs. for the mazindol group and -3.8 lbs. for the placebo group. This was a statistically significant difference ($p. < .001$). Figure 2 presents the mean cumulative body weight loss at each study point during the trial period.

2) Skinfold measurements for both triceps and subscapular showed significant decreases in thickness for both mazindol and placebo, although there were no statistically significant differences between the two groups. The mean decreases after 12 weeks of medication are shown below.

	Triceps	*Subscapular*
Mazindol	-6.2 mm	-3.6 mm
Placebo	-6.9 mm	-3.4 mm

3) The recording of average degree of appetite suppression, average duration of appetite suppression, ability to adhere to the recommended diet and linear measurement of hunger showed no clinically significant changes or differences between the groups, with the exception of a significant decrease of hunger before lunch in the mazindol group as compared to placebo.

Safety parameter changes are summarized in Table II. There were no statistically or clinically significant differences observed between the two treatment groups in laboratory parameters.

Minor side effects were reported by four patients in the mazindol group (sleepiness, three; dry mouth, one).

Discussion

Results of this study indicate that mazindol, given in a dose of 2 mg. daily, is well tolerated by adolescent patients and produces a significantly greater degree of weight loss than placebo. By the end of the study mazindol had produced an average weight loss of 13.8 lbs., while placebo had resulted in a loss of only 3.8 lbs. This was both a statistically and clinically significant difference.

The side effects found in mazindol-treated patients were minimal and not considered to be of

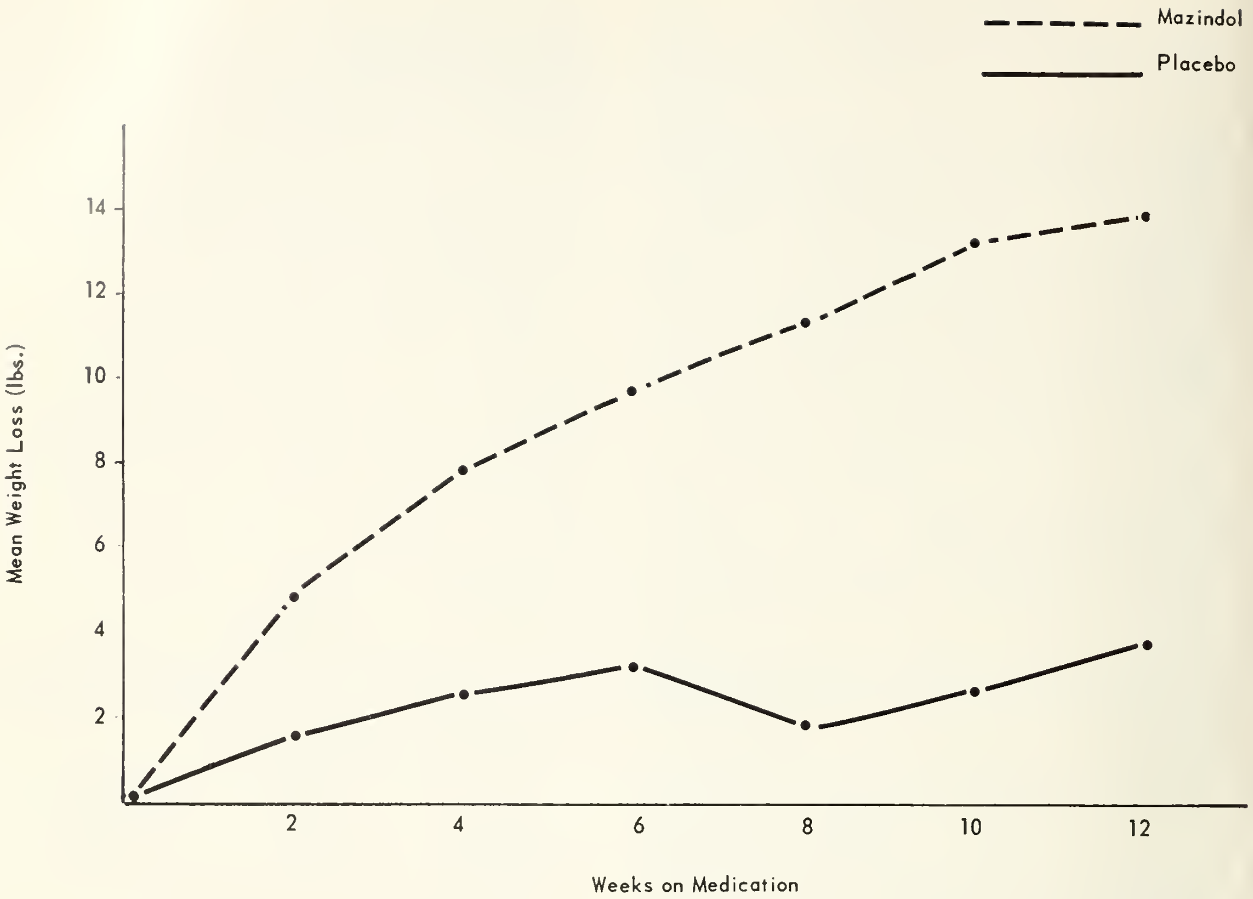

Figure 2
Mean Cumulative Weight Loss

TABLE I
BACKGROUND CHARACTERISTICS

Items	*Mazindol*	*Placebo*
1. Number of Subjects	12	11
2. Sex (Male)	4	0
3. Sex (Female)	8	11
4. Mean Age (years)	13.7	14.9
5. Number of Standard Deviations Overweight (Mean)	2.1	1.9
6. Mean Initial Weight in lbs.	173.5	174.6
7. Mean Birthweight in oz.	110.9	115.8
8. Mean Weight of Parents (Mother)	154.0	159.5
9. Mean Weight of Parents (Father)	183.7	193.3
10. Mean Ideal Weight in lbs.	110.9	115.8
11. Body Frame—Small	3	1
12. Body Frame—Medium	5	9
13. Body Frame—Large	4	1

TABLE II
SUMMARY OF CHANGES IN BODY WEIGHT AND VITAL SIGNS

	Average Change at End of Medication Phase	
Parameter	*Mazindol*	*Placebo*
Body Weight	-13.8 lbs.	- 3.8 lbs.
Oral Temperature	- 0.02	- 0.45
Respiratory Rate	- 2.0	- 0.36
Supine Systolic Blood Pressure	-13.5 mmHg	-15.5 mmHg
Supine Diastolic Blood Pressure	- 2.00 mmHg	- 4.09 mmHg
Supine Pulse	- 2.20	+ 2.91
Standing Systolic Blood Pressure	-16.00 mmHg	+11.36 mmHg
Standing Diastolic Blood Pressure	+ 2.00 mmHg	- 3.64 mmHg
Standing Pulse	+ 0.60	+ 1.27

clinical importance. The lack of central effects, such as are found with amphetamines, suggests that this drug may have significantly less abuse potential.

Collipp, et. al.[1] reported in 1971 that there were no differences in the weight loss of children who received no medication, chlorphentermine, phenformin, diethylpropion or placebo, whereas in this study we have shown that the mazindol group lost significantly more weight than the placebo group, suggesting that this new agent may be a more potent anorexic compound.

Summary

A double-blind study comparing the safety and efficacy of mazindol, a new appetite suppressant, and placebo was conducted in obese adolescent patients. All patients received a fixed daily dose of one tablet, one hour before the noon meal for 12 weeks. Diet was prescribed initially and patients were instructed to remain on this diet. Efficacy of drug was measured in terms of weight loss and skinfold thickness loss. Mazindol produced an average weight loss of 13.8 lbs. at the end of the study, and placebo a loss of 3.8 lbs., a statistically significant between-group difference. Both treatment groups manifested significant and approximately equivalent decreases in skinfold thickness. Mazindol was well tolerated and no clinically significant changes occurred with regard to safety parameters.

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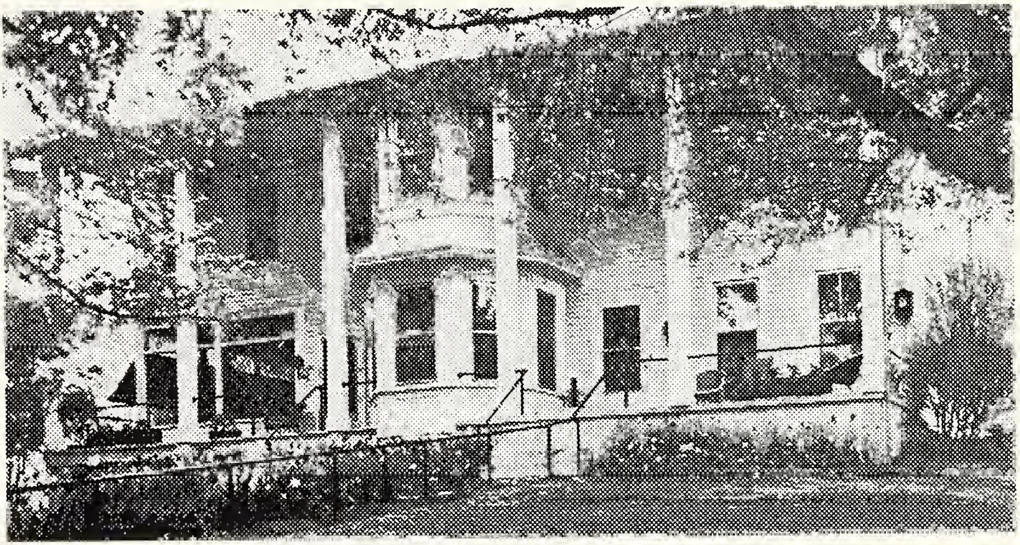

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The President's Page

A Foundation for Medical Care is an organization of practicing physicians sponsored by a local, County or State Medical Society. It is a separate and autonomous corporation with its own Board of Trustees, elected initially by the sponsoring medical society. Some Foundations for Medical Care have a minority of lay members on their Boards.

The objectives of a Foundation for Medical Care are: 1.) high quality medical care at minimum cost; 2.) free choice of personal physician and hospital by the patient; 3.) the fee for service concept; 4.) peer review to control over and underutilization; 5) minimum standards for health care. It accepts the service principle of insurance; 6.) harmonious functioning of a foundation with all segments of existing health care programs and, where necessary, in experimenting with and developing new health care programs, thereby recognizing that health is a community affair; 7.) establishment of fee guidelines based on prevailing fees; 8.) peer review of utilization and fees; 9.) guard and preserve the physician-patient relationship; and 10.) to serve as a mechanism to draw physicians together with some bargaining power.

The anatomy and structure of a Foundation for Medical Care: 1.) A medical society decides it wants to form a Foundation for Medical Care. 2.) The medical society elects a Board of Trustees of the Foundation. 3.) The Trustees elect officers, write the by-laws and incorporate. 4.) Eventually a minority of lay members are appointed to the Board by the Board. 5.) The Board prepares a minimum standards plan. 6.) The National Insurance Council surveys carriers and seeks their cooperation. 7.) Hospital cooperation is sought for inpatient care and review. 8.) Fee guidelines are prepared. 9.) Work is begun on a modified certified hospital admissions program (CHAP) with length of stay guidelines. 10.) Work is begun on establishing treatment profile guidelines. 11.) Peer Review mechanisms are set up. 12.) Administrative staff is hired as close to the beginning of the program as possible. And 13.) From the beginning participating physicians are solicited.

Foundations for Medical Care generally get both starting and operating money from the insurance industry. This takes time and organization. Starting monies often take the form of grants or loans by medical organizations, and there is a one-time enrollment fee for participating physicians.

There are several types of Foundations for Medical Care. The first was the San Joaquin Foundation for Medical Care. This processes its own claims, and the physicians assume part of the risk. It is its own insurance company and could be an HMO. The next type is that of Mendiko Lake, which processes its own claims but in which the insurance carrier rather than the physician is at risk.

Most of the Foundations for Medical Care formed East of the Mississippi choose not to involve themselves in claims processing but rather choose to provide fee and utilization guidelines and review. These guidelines are fed into computers by the insurance carriers, who process the claims. More than 95% of these claims fall within the established percentile and are processed routinely. The physician is then paid by the carrier forthwith. Those claims which do not fit into the established percentile are kicked out by the computer and sent to the Foundation for review. The decision of the Peer Review Committee is binding on both the physician and the carrier.

There are usually a few problems that go along with the establishment of a Foundation for Medical Care. It is essential to have a viable working relationship with the insurance carriers. Cooperation from such sectors as labor, management and consumer groups does not always come easily. Getting a high percentage of the practicing physicians to participate can be a problem. Getting the money to start up is often difficult.

What does it mean to be a participating physician in a Foundation for Medical Care? 1.) He agrees to participate in the review mechanisms to develop utilization and fee guidelines. 2.) He agrees to abide by the fee guidelines prepared by his peers. This can be renegotiated annually. 3.) He agrees to pay a stipulated one-time enrollment fee. 4.) He will find more of his services, including ambulatory care, covered by insurance for the benefit of his patients. 5.) His patients will have more comprehensive coverage for the same cost because of the decrease in over-utilization, particularly of hospital beds. 6.) He obtains the benefit of continuing medical education through his participation in the peer review process.

There are at present three Foundations for Medical Care in Connecticut: 1.) the Hartford County Health Care Plan, which is operational; 2.) the New Haven County Foundation for Medical Care, which is about to become operational; and the Greenwich Foundation for Medical Care, which is a small Foundation and which is operational.

James H. Root, Jr., M.D.
President

On Cavil, Panjandrums and One Paladin

When acupuncture burst on the medical horizon a decade ago, the drum-beating panjandrums of the lay press hailed it as almost a cure-all for every disease from hangnails to cancer. They had literally caught the American medical community with its knowledgable pants down. So ecstatically fervent were the pie-in-the-sky claims that (inconceivable to this writer) the practice of the "ancient art" has been both allowed and condoned in a medically sophisticated country such as the United States.

This is not to say that the technique of acupuncture does not have merit. It certainly has been shown to be effective in some clinical situations. Embarrassingly, western medicine, and particularly the United States, has little knowledge and less experience with it. Nor can one deny that acupuncture may, in fact, have different scientific justification than appreciated in the west.

Anachronistically, however, why in the past decade have all manner of experts (self-styled, con gressional and otherwise) junketed to Peoples Republic of China with the anesthesiologists coming relatively last? Anesthesiology is the very medical specialty which might (logically, at least) be best able to evaluate this "ancient art" of pain relief by western medical standards.

Not at all by accident and far better late then never, did the report of John Bonica, M.D. chairman of the Department of Anesthesiology at the University of Washington appear in the June 17, 1974 issue of JAMA,[1] detailing his observations on the use of therapeutic acupuncture while visiting China as the representative of the American Society of Anesthesiologists. Dr. Bonica's qualifications are unquestionably those of a paladin of the realm in the attack on pain, a seigneur "sans peur, sans reproche." Nevertheless, Dr. Bonica's extensive report of the many places he visited in China is distressingly filled with repetitious statements of "no data available," "no objective evidence," and "no controlled studies."

Pain is a *subjective* sensation which is exceedingly difficult to quantitate, but as a 1962 *JAMA* article regarding acupuncture stated:

"No matter how bizarre a therapy it is, how lacking in rationale and how uncertain its value, it is concerned with patients and disease, and hence it is a phenomenon which must interest the world of medicine."

Perhaps acupuncture is "for real" and perhaps not. Serious research is now being actively pursued on both sides of the Pacific Ocean. Bonica's paper detailing the lack of controlled data, and Carron's paper[2] on the complications of acupuncture both pinpoint the need for erudite and sophisticated evaluation *by western standards.*

The time has come to "put the putty" to acupuncture.

FREDERICK W. HEHRE, M.D.

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Renal Dialysis and Transplant

Medicare reimbursement for the treatment of patients with chronic renal disease who require continuing renal dialysis or a kidney transplant was extended to individuals under 65 last July 1, 1973. Broad implementation of the program has been delayed due primarily to confusion over the method of administering the program and the mechanism for reimbursement of physicians for care of patients in routine, stable dialysis. While the Bureau of Health Insurance (the government agency responsible for overseeing the Medicare program) contends that physician supervision during dialysis should be included as a component of the dialysis facility's charge for the service, the American Medical Association is urging that physicians attending patients with end-stage renal disease be reimbursed directly on a fee-for-service basis. This stand is among the major components of the recent Report of the Council on Medical Service: Renal Dialysis and Transplant Under Medicare.

These two opposing viewpoints are reminiscent of the controversy surrounding exclusion of hospital-based physicians (anesthesiologists, radiologists, pathologists and psychiatrists) from coverage under Part A of the original Medicare law. Because of this, hospitals are currently required to distinguish between the medical services rendered directly to the patient (to be paid for on a charge basis under Part B) and the hospital portion of the service (to be paid for on a cost basis under Part A). The result has been an administrative burden for hospitals where costs attributable to direct professional services of the specialists themselves must be distinguished from that portion provided by the hospital. Further, the law restricts those physicians who prefer to remain in an established relationship with a hospital and have their compensation reimbursed as part of hospital costs under Part A.

Perhaps the resolution of the dialysis reimbursement issue can avoid the same problems. Hospitals and physicians should be free to determine mutually beneficial arrangements. Further, the Medicare law should not burden hospitals with administrative hair splitting that has no relationship to quality of care or containment of costs. Ideally Part A should cover all dialysis services, inpatient and outpatient, that are billed by the hospital. At all other times the physician would be paid on a reasonable charge basis under Part B for professional services to patients with chronic renal disease. Any distribution between doctor and hospital for the distribution of Part A payments would not be a concern of Medicare.

HEW, in issuing a final policy decision on the reimbursement question, has authorized two alternative methods. The first, entitled "Unit Reimbursement," would reimburse private physicians on a reasonable charge basis for services not provided during a maintenance dialysis episode, while the facility (e.g. hospital) would be paid on a reasonable cost basis for all services during such an episode. For salaried physicians, the facility would be paid reasonable cost for the proportion of the physician's salary attributable to provision of covered services.

The second method, "Comprehensive Reimbursement" would establish "adjusted standard charges" for nephrology services other than during hospitalization. The "standard charge," which presumably includes physician services during dialysis, would be adjusted to reflect regional variations, as well as variations in individual physicians' practices. For services during hospitalization, the physician would be paid on a reasonable charge basis.

The second alternative satisfies the Renal Physicians' Association's position regarding direct payment to physicians for services rendered. Although some individuals may consider such a stipulation unnecessary, the "Comprehensive Reimbursement" method seems a definite improvement over a fee-for-service method that has proved so awkward for hospital based specialist services.

In offering a choice of reimbursement methods, HEW has attempted to maximize physician choice and satisfy those who promote direct professional reimbursement for dialysis services. At the same time, this policy seeks to minimize any disruptive effect the new law may have on hospitals.

David A. Pearson, Ph.D.

Assistant Professor, Department of Epidemiology and Public Health, Yale University School of Medicine.

Letters to the Editor

Letters to the Editor are welcomed and will be published, if found suitable, as space permits. Like other materials submitted for publication, they must be typewritten *double spaced* (including references), must not exceed 1-1/2 pages in length and will be subject to editing and possible abridgment.

THE NEW DIRECTION

To the Editor: I am taking this opportunity to congratulate you on the job you have done since assuming the editorship of *our* Journal.

There has been an increasing improvement in the quality of the content and style of recent articles.

Hopefully *Connecticut Medicine* can become a leader in Regional Medical Journalism.

Sincerely yours,

Edward J. Bernacki, M.D.

Torrington, Conn.

MALPRACTICE

To the Editor: Medical malpractice has become a gold mining operation for insurance money. When a doctor is really culpable an enormous windfall is possible. But any result that does not suit the patient even if treatment is perfect, can go into the giant lottery of the litigation industry. And where judgments exceed coverage, doctors face financial ruin or long term debt.

With the contingency fee, anyone with a gripe who can find a lawyer can play the game. If in court, there is the slightest doubt that the doctor is totally blameless, than a substantial settlement comes forth. Even a fraudulent claim exacts a nuisance fee from the defendant. Escalating insurance coverage has not been able to keep pace with the escalating demands of plaintiff's attorneys.

Avarice of attorneys multiplied by the greed of clients, the compassion of juries, the generosity of judges, and the eagerness of insurance companies to sell more insurance aid and abet the malpractice litigation industry. All this is intensified by the American juridical principle that it is better to let 9 criminals go free than convict one innocent man. When applied to malpractice it means "better to fleece 9 doctors rather than deny one victim of medical error his sizable settlement."

But malpractice also assures that the public will pay more and get less. It discourages the assumption of professional risk and denies patients gains that may be achieved only if risk is accepted. With the whole system weighted to reward greed, something should be done. Doctors should ask for a federal law that plaintiffs' lawyers be paid only for the amount of work done and not get one-third or one-half of the award. Attorneys should get properly paid for their work, but not be tempted to become millionaires by windfall. Everyone with a real grievance should have his day in court. But this should not become a free-for-all for the fast buck.

Very truly yours,

Sidney Vernon, M.D.

Willimantic, Conn.

Reflections From The Dean's Office

Robert U. Massey, M.D.

Twelve years ago a Professional Advisory Committee, appointed to assist President Jorgensen and the Board of Trustees in planning for a "medical-dental school" for the University of Connecticut, laid down some of the major goals which should form the foundation of this great enterprise. First the Committee asserted: "There is no point whatsoever in launching these programs unless all who are responsible are agreed that they must be and will be programs of excellence." They then proceeded to describe the type of medical and dental school which was being proposed. I have reproduced that entire section from their 1962 report:

"The general objective of excellence in medical and dental education can be the only goal that will meet the greatest needs of Connecticut and the nation in the long run. The general objective must be translated into operational terms by the University through its deans and their staff, yet unchosen. We have, however, reached certain conclusions on current issues in medical education that require comment. These issues have to do with the kind of graduate a school produces, and the relationships among service, research and specialization in the orientation of a school.

"The dependence of medical and dental practice upon research in the basic and clinical sciences must be recognized as a modern fact of life. The spirit of inquiry must characterize good medical and dental education. Thus the Committee believes that the new medical and dental school must be planned so as to include graduate education and research as major functions. We do not consider that these commitments mean that the new schools of the University of Connecticut will graduate students turning chiefly to research or to specialties for their professional careers. Instead we consider that this environment is necessary for educating future physicians and dentists, regardless of the pattern or form of their professional practices, who will be constantly alert to change and innovation in their fields.

"The needs of the people of Connecticut for family physicians must be a consideration in planning the new schools. There are many arrangements being tried by certain schools to insure that preparation for family practice is not neglected or discounted. While it is too early for the Committee to present any particular plan to be followed by the University of Connecticut medical and dental school, it can be said with confidence that the general pattern should be one of preparing students for successful pursuit of any and all careers in medical and dental work. To do otherwise would violate the essential principle that a University must leave the career choice of its students to the students themselves. All possible care must therefore be exercised to avoid conscious or unconscious career bias in the preparation of individual students.

"A graduate program is essential to the teaching atmosphere of the schools, to attract and hold intellectually active staff, and to contribute nationally to the training of future teachers in the health and health related sciences.

"Approximately one third of the faculty that train medical students throughout the nation have the degree of doctor of philosophy. The graduate program at the new schools should be under the jurisdiction of the present Graduate School of the University of Connecticut.

"A continuing medical and dental educational program for specialty and family practice must be considered an essential part of the program of the new schools. There is also a need for the inauguration and development of ancillary health programs at the medical-dental center."

ROBERT U. MASSEY, M.D., Dean and Professor of Medicine, University of Connecticut, School of Medicine, Farmington, Connecticut.

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Renal Dialysis and Transplant Under Medicare

Report No. 2 by the Council On Medical Service of the A.M.A. to the House of Delegates at its June, 1974 Meeting.

Effective July 1, 1973, as a result of Section 2991 of Public Law 92-603, patients with chronic renal disease who require continuing renal dialysis or a kidney transplant for treatment of such disease, who are under 65, and who meet Social Security eligibility requirements, became eligible for Medicare reimbursement for the cost of such treatment. Medicare coverage for dialysis patients begins the third calendar month after the month in which they begin a course of dialysis.

Effective full-scale implementation of the program has been delayed, however, due primarily to confusion over the method of administering the program. While a number of facets of the program have been in controversy, a major concern of the Association has been the mechanism for reimbursement of physicians for care of patients in routine, stable dialysis.

The Bureau of Health Insurance's Intermediary Letter Part A 73-25/Part B 73-22, July 1973, indicated the interim approach, pending publication of regulations, selected by Medicare officials. It was the contention expressed in the Intermediary Letter that only a very limited percentage of patients undergoing "maintenance dialysis" require "Physician personal services." On this assumption, physician supervision during such dialysis was not considered a "patient-care service" and was, therefore, not reimbursable on a reasonable charge basis, but should be included as a component of the dialysis facility's charge for the service.

This position has been strongly opposed by the Council on Medical Service, with the support of the House of Delegates, as expressed in its adoption of Council Report I (A-73) and J (C-73), dealing with this matter. Organizations representing physicians providing care to such patients, as well as individual nephrologists, have also protested this administrative decision. At a meeting in Washington with the Assistant Secretary (Health) of Health, Education and Welfare, Council members, together with representatives of four other organizations representing physicians and patients, urged that physicians attending patients with end-stage renal disease be reimbursed directly on a fee-for-service basis. Developments leading up to that meeting, and the text of the "Joint Statement" presented to the Assistant Secretary are contained in Report J (C-73).

Actions at 1973 Clinical Convention

At the Association's 1973 Clinical Convention, the House of Delegates adopted Council Report J (C-73) and confirmed the "Joint Statement" as Association policy in regard to reimbursement, peer review, certification, expediting, and home dialysis in regard to this program.

The House also adopted Resolution 38 (C-73) on "Chronic Renal Dialysis," which called on the Association to protest the current directives governing renal dialysis under Medicare; to urge a return to application of standard Medicare reimbursement methods until more acceptable regulations were developed; and to offer the Social Security Administration the medical profession's assistance in developing a proper approach. Such assistance would include advice and counsel, partnership in a study of renal dialysis and its professional component and charges, and local medical society peer review of this matter.

In adopting Resolution 38 (C-73), the House added, as a final "resolved," the statement:

> "Resolved, That as a matter of principle this House reaffirms its position of opposing the concept of retainer payment or fees for medical service."

The House also considered Resolutions 65, 66, and 70 (C-73), all dealing with the renal dialysis problem, and referred them to the Council for its use as suggested courses of action in its ongoing efforts to reach a solution.

Developments January-April 1974

Early in 1974, the Council was informed that the Bureau of Health Insurance was considering a new approach to reimbursement of physicians for care of patients in maintenance dialysis. The new approach would involve a retainer payment, fixed by the Bureau, to be paid the physician monthly, for which he would provide all routine care for the dialysis patient. Non-routine care, treatment of unusual complications, and other exceptional services would not be covered by the retainer, but would be reimbursed separately on a fee-for-service basis.

The Council recognized that this would be a significant improvement over the position taken in the Intermediary Letter, in effect from July 1973 until at least April 1974, in that payment for physicians' services would be made directly to physicians, rather than through the facility. It would, therefore, meet one requirement of the Association's policy. It would not, however, be on a fee-for-service basis but would have only the most general relationship to services provided in any one case, and would seem to be specifically opposed by the House's amendment to Resolution 38 (C-73) quoted above.

In February 1974, at the request of the Renal Physicians' Association, the Council met with an officer of that Association to discuss the proposed change in BHI policy. At the same meeting, the Council also discussed the renal disease program with the representatives of the Assistant Secretary (Health).

Position of Renal Physicians' Association

The Renal Physicians' Association, an organization whose formation was spurred by the Medicare position regarding the end-stage renal disease program, represents primarily physicians actually engaged in providing care to patients with this disease. These physicians have been greatly concerned with the federal position, and members of the Association have met and have corresponded with the Council and with HEW staff concerned with the program. They have rejected the current approach, which equates their professional services to patients with a facility overhead cost. However, with the enactment of the amendment which presumably established Medicare responsibility for reimbursement, many alternative sources of reimbursement have disappeared. It is becoming impossible, under present circumstances, for these physicians to continue treating these patients.

The Renal Physicians' Association was also aware of the Bureau of Health Insurance's consideration of a "retainer" approach and of the American Medical Association's opposition to such a concept. They had, therefore, developed a modification of the proposal, calling for a comprehensive monthly payment to physicians for services actually rendered the patient, based on the physician's average charge per patient for services rendered, and requested Council opinion as to whether this would be compatible with the AMA position.

The Council, in response to this request, reviewed American Medical Association policy both in regard to renal dialysis reimbursement and physician reimbursement generally. It noted that a "retainer," in its common meaning, is a payment made (most commonly to a lawyer) to engage the services of a professional or to assure a prior claim on those services should they be needed.

The "retainer" approach, if defined as a payment in advance of service or aimed at assuring the availability of a physician, would appear to be unacceptable on the ground that the Principles of Medical Ethics call upon physicians to limit the source of professional income to services actually rendered, and to establish a fee commensurate with services rendered. The Council's own Report I (A-73), in discussing the "retainer" approach under consideration by the Bureau of Health Insurance in early 1973, spoke to a proposed monthly payment per patient, fixed by the Bureau nationwide, bearing no direct relationship to the amount or type of service which the physician has rendered and ignoring regional or local variations in charging patterns. The Council, therefore, took these factors into account as helping to delineate the "retainer" specifically opposed by the House of Delegates.

The Council also took into consideration that physicians in other specialty areas do, on occasion, establish a comprehensive charge for certain services which can be considered similar to that proposed by the Renal Physicians' Association. This approach was summed up succinctly in the Council's own Report C (A-69) on "American Medical Association Policies Relating to Billing Procedures":

> "It should be recognized that a comprehensive (package) charge set in advance, covering all necessary ordinary care of a particular surgical condition cannot be a charge for a specific number of visits and other physician services or a totalling-up of the individual charges for such services; rather, it tends to be a rough averaging by the physician of the charges usually incurred in such complete treatment."

In Council Report C (A-69), the Council also noted that "The Association has, so far as we can determine, no formal policy relating directly to these so-called 'package' charges." No question concerning their appropriateness has, to the Council's knowledge, been raised since, nor is surgery the only field in which this approach is utilized.

In view of such background information, the Council informed the Renal Physicians' Association that the approach that Association was considering would, in the Council's opinion, be compatible with American Medical Association policies, under the following conditions:

"(1) The comprehensive charge covering all necessary ordinary care of a particular condition will be based on a rough averaging by the physician of the charges usually incurred in such treatment, in such fashion that, if all patients treated on the basis of such a comprehensive charge were billed instead for individual specific services rendered, the total charges would be of the same order of magnitude.

(2) The comprehensive charge would cover clearly specified types of routine services to dialysis patients, but without regard to the number of times any individual patient received any one

of such services. Any non-routine services, not so specified, would be considered as outside the comprehensive charge and would be billed separately, on a fee-for-service basis.

(3) In accordance with the Association's basic policy that reimbursement from government programs should be on the basis of the usual and customary or reasonable charge, the dollar amount of the individual physician's "comprehensive charge" would be determined by the physician. Concordance with customary charges would be determined by Medicare intermediaries, as with other physicians' charges, by review of charge data from calendar 1972 (for the fiscal year ending June 1974).

(4) No nationwide dollar ceiling on such comprehensive charges would be established by federal regulation or directive. Such a ceiling, once published, has proven to promptly become not only a ceiling but a floor, i.e., a fixed fee nationwide, which is not only unsound economically but against Association policy. The "prevailing charge" approach now used in Medicare can be used here as well, recognizing that, because of the limited number of physicians involved, the area on which the prevailing charge is calculated may, for some sections of the country, have to be a large one. (Medicare already uses different areas for some specialties than for types of medical practice which are more common.)

(5) Services of local and state medical society peer review bodies would, as always, be available for consultation concerning appropriateness of charges."

It was the Council's opinion, and was so stated to the Renal Physicians' Association, that if these conditions were embodied in the payment mechanism, a comprehensive payment for physicians' services to maintenance dialysis patients would generally meet the Association's requirements of payment to the physician, on a fee-for-service basis, and would avoid the "retainer" approach and its difficulties.

However, the Council, in transmitting this position to the Renal Physicians' Association, specifically stated that the Council "still holds that Medicare reimbursement methods generally applied to physicians' services are preferable and practicable." The Council still sees no clear justification for any approach to reimbursement of physicians for this care different from reimbursement for other Medicare covered services, i.e., payment limited by the individual physician's own customary charges and the prevailing charge for the service.

Federal officials have, indeed, argued that Medicare coverage will include most dialysis patients so that there will be no basis for comparing physician charges within and outside the program. The Council believes that this argument lacks strength, since:

(a) Prior to the enactment of PL 92-603, Medicare covered treatment of patients with end-stage renal disease who were 65 and over. (The new program extends coverage to those under 65.) There is, therefore, Medicare experience with payment on a "reasonable charge" basis upon which to draw.

(b) Medicare "reasonable charge" screens for the fiscal year ending June 30, 1974, are based on physicians' actual charges during calendar year 1972. PL 92-603 was enacted the end of 1972 and the renal disease program became effective in July 1973. Most of the data upon which current charge screens would be based comes, therefore, from the period before the program became law—the passage of Section 2991 could not be claimed as encouraging physicians to increase their charges, while future increases in the level of Medicare reimbursement are limited to a percentage determined by HEW on the bases of appropriate economic indexes.

HEW "Statement of Policy"

Early in March 1974, Association representatives meeting with the Assistant Secretary (Health) and key members of HEW staff, were informed that HEW was developing a "statement of policy" to govern future development of the renal disease program. No details were available at the time, but HEW spokesmen indicated their belief that it would be more acceptable to the Association than current "interim" methods of administration.

Later in March, representatives of the Association, and several other groups concerned with the implementation of the program, were briefed by HEW staff concerning the content of the proposed policy. While the reaction of the non-governmental representatives was sought, it was made clear that the policy statement would not necessarily reflect such comments. Since the statement was still in the draft stage, and had yet to be approved in final form by the Secretary of HEW, the Council did not consider it appropriate to publicize the statement at that time.

The document, entitled "Final Policies, P.L. 92-603, Section 2991, End-Stage Renal Disease Program of Medicare, April 1974," was released by the

Secretary of HEW on April 17, 1974. After a section on the background of the program, including comments on the broad authority given the Secretary and the estimated cost of the program (a billion dollars annually within ten years), and a one-page summary of the "interim program" in effect since July 1, 1973, the "Final Policies" are stated under the following headings:

A. Organizational Issues

1. Development of a "network" approach to ESRD care

The intent is to organize, for population bases of at least two million, networks of end-stage renal disease (ESRD) facilities incorporating the capacity for performance of all ESRD diagnostic and therapeutic services, including a data system monitoring patient care and facility participation in transplant and dialysis registries. Coupled certification will be required—i.e., certification of a facility not independently, but as part of a network. HEW will designate network areas; design of local networks will be a local responsibility, involving CHP and local review boards.

2. Requirements for Minimal Utilization Rates and Population Bases

A minimal utilization rate, especially for transplant facilities, and a suitable population base to be served will be part of the certification requirement for facilities and networks. (Aside from the two million population figure given above, rates are not specified.) As these requirements are phased in, some existing facilities will be denied certification. In such instances, certified facilities will be required to give consideration for medical staff appointment to "displaced" physicians.

3. Establishment of Local Medical Review Boards (LMRB)

Local medical review boards (required by the law to determine appropriateness of patients for proposed treatment) will also carry out utilization review and quality assurance responsibilities. Where possible, these boards will be integral parts or agents of PSROs. Board membership will represent all treatment modalities and appropriate professional specialties for network operation.

4. Mechanisms for Professional Consultation

For functions related to professional review and planning which cannot be carried out at the local level, and to minimize the number of separate advisory groups, the National PSR Council and regional HEW offices will develop mechanisms within their existing structure for regional and national consultation with professional and patient groups.

B. Reimbursement Issues

1. Physician Reimbursement

The statement presents a lengthy discussion of the problems involved in physician reimbursement, arguing that Medicare law requires "consideration" of customary and prevailing charges, but does not limit consideration to these criteria, and citing a statement by Senator Long as "Congressional guidance" implying broad HEW authority. Some of the arguments mentioned in this and previous Council reports as to the difficulty of applying the usual Medicare "reasonable charge" screens are repeated—lack of non-Medicare data for comparison, wide variations in physician charges—and the interim policy is defended.

The statement recognizes, however, the controversy generated by the interim policy—physician resistance to receiving payment through institutions, threats to the physician-patient relationship, discrimination against a single group of specialists, practical difficulties in negotiating with facilities for payment, state laws prohibiting such a contractual relationship. The statement notes additional practical difficulties, in that intermediaries have difficulty with the policy and with distinguishing between "routine" dialysis services (billed through the facilities) and "acute" services, billed separately on a "reasonable charge" basis.

To resolve these issues, and also to eliminate any incentives which the present payment approach includes which might keep physicians from recommending self-dialysis and home dialysis, the policy decision is as follows:

(a) *Maintenance Dialysis Services*

Alternative methods will be authorized for physician reimbursement, at the option of the physician for all his patients:

(1) Unit Reimbursement (Modified Interim)

For physicians in private practice, the physician would be paid on a reasonable charge basis for services not provided during a maintenance dialysis episode, while the facility would be paid on a reasonable cost basis for all services during such an episode; for the salaried physician, the facility would be paid reasonable cost for the proportion of the physician's salary attributable to provision of covered services.

(2) Comprehensive Reimbursement

The physician would be paid an "adjusted standard charge" for all nephrology services during a month, other than during hospitalization; for services during hospitalization, he would be paid on a reasonable charge basis. Separate standard charges would be established for limited care and self-care patients, and the standard charge will be established by HEW "taking into consideration the unit charge reimbursement for total services during a monthly interval as well as 'comparable' charges for similar services." The standard charge will be "adjusted" to reflect regional variations, as well as variations in individual physicians' practices.

The statement discusses the possibility of requiring physicians who choose "comprehensive reimbursement" to accept assignment, and argues that HEW could require this within the law and that this would limit patient liability, and that patients have little choice of provider in this program. However, the statement continues that the voluntary approach to assignment will be retained "at this time," since requiring assignment will antagonize physicians and may not be necessary, "since physicians have generally been more willing to accept assignment in cases of prolonged illness, particularly when patient resources are low."

(b) *Self-Dialysis Training*

The statement proposes a "comprehensive reimbursement" to the physician, also based on an "adjusted standard charge" for an entire course of training.

2. *Facility Reimbursement*

The statement indicates problems with applying either "reasonable cost" or "reasonable charge" mechanisms for reimbursing providers and suppliers, specifically in the area of escalating costs and misallocation of resources. The mechanism proposed is:

(a) "reasonable cost" reimbursement of facilities;

(b) within upper limits on reimbursable costs, probably based on a classification scheme involving size, location, services provided, and patient mix;

(c) plus an economy "incentive" in the form of "target rates," probably also based on a classification scheme. A facility whose costs fall below its "target rate" will share in the difference.

The preceding summarizes all points touched upon in the nine pages of the statement of "Final Policies." The press release accompanying the policy statement contains the additional information that standards for the regional treatment networks and mechanisms for professional review will be developed by HEW's Bureau of Quality Assurance, while the Bureau of Health Insurance will be responsible for development and implementation of the reimbursement system.

Council on Medical Service Comment

The Council on Medical Service believes that several points must be made clear concerning the policy statement as a whole. In the first place, this is a statement of intent on the part of the Department of Health, Education and Welfare; it does not in itself *implement* any change in the renal disease program, but instead provides the broad guidelines upon which new regulations and Intermediary Letters will be based. Until such regulations and letters are issued, no actual change will take place in the operation of the program. The Council has, however, been informed that the Bureau of Health Insurance is attempting to develop the new reimbursement procedure called for at the earliest possible date.

The Council also wishes to place on record with this House a disclaimer. While the press release accompanying the policy statement quotes the Assistant Secretary (Health) as saying, "I am pleased that virtually every health professional and consumer group in the kidney disease field with which we worked agreed on the approach that we are taking," the Council must maintain its reservations concerning the approach until it can explore the implementation by the Bureau of Health Insurance.

Staff of the Department of HEW indicated, at the mid-March meeting attended by Association representatives for a briefing on the then-proposed statement of policy, that they had seen and taken into consideration the five conditions listed in this Report under the subtitle "Position of Renal Physicians' Association." However, a comparison of these conditions and the description of the "comprehensive reimbursement" approach contained in this Report's summary of the policy statement makes it apparent that only examination of the Bureau of Health Insurance's implementation of the policy will determine whether those conditions are actually met.

Association representatives, at that briefing session, confined their comment on the reimbursement approach to the statement that it did constitute a significant improvement over the then current approach, and opposed the suggestion of mandatory acceptance of assignment as a condition of this approach, with both of which opinions the Council concurs. The new approach does, at least, achieve resumption of direct payment to physicians for services rendered patients in maintenance dialysis, one part of the Association's policy regarding reimbursement.

The Council feels it appropriate to note also that representatives of the Renal Physicians' Association attending that briefing session *did* express satisfaction with and general acceptance of the new approach.

In general, however, the Council believes that this policy statement provides a framework within which the program *could* follow the "basic principles" enunciated in the Joint Statement presented to the Assistant Secretary (Health) in September 1973 and incorporated in Council Report J (C-73):

> "(1) *Reimbursement:* The assembled group agrees that physicians attending patients with end-stage renal disease should be reimbursed directly, on a fee for service basis, on adequate documentation of services rendered, with quality of care and cost containment the responsibility of peer review."

As previously noted, the new policy will at least allow direct reimbursement. It does not authorize payment on a fee for service basis, in the sense that an individual payment is made for each individual service, but the proposed comprehensive reimbursement *may* be an acceptable approach if properly adjusted to individual physician and regional charging patterns and is acceptable to the physicians providing such services.

> "(2) *Peer Review:* Peer review of care provided to patients with end-stage renal disease, as with other medical services, should be performed at the most local level practicable, consistent with effective review, with participation of nephrologists and other physicians expert in the care and treatment of such patients involved in developing and applying review procedures."

The composition and role of the local medical review boards, as described in the policy statement, appears consistent with this principle.

> "(3) *Certification:* Certification of facilities qualified for reimbursement under Medicare for care of end-stage renal disease should be based on clearly-spelled out criteria which must be met, and application of such criteria should be applied locally."

The certification approach described in the policy statement appears to meet the criteria of clearcut delineation at the national level and local application. The Council wishes to emphasize, however, that it has not as yet seen the specific criteria, and that these must be considered on their own merits when issued.

> "(4) *Expediting:* Circulation of interim guidelines by BHI has resulted in a temporary paralysis of payment to facilities, physicians, and to suppliers of patients on home dialysis, and in a corresponding hardship on patients with end-stage renal disease. The assembled group urges that BHI seek prompt resolution of this reimbursement problem."

This statement clearly still remains appropriate, as of the beginning of May.

> "(5) *Home Dialysis:* Home dialysis has great potential both for quality patient care and for economy. The Medicare reimbursement program should be structured to provide incentives to physicians and patients for use of home dialysis where appropriate."

While the policy statement does provide an approach to payment of physicians for training patients in self-dialysis, it does not address the question of patient incentives. This still needs exploration.

As the Council has indicated, it considers the policy statement to be, in many ways, a significant improvement both over previous proposals under discussion and over mechanisms actually operative through the "interim" Intermediary Letter. Beyond this point, however, the Council does not believe that the Association should adopt a position either of approval or disapproval until such time as the policies are implemented through HEW regulations or directives.

The Council feels it appropriate also to call particular attention to certain points in this policy statement which may lead to future difficulties: the assumption made by HEW, prior to development and publication of certification criteria, that some existing ESRD facilities will not be certified; the policy that, when such facilities are not certified, facilities which are certified must give consideration to admitting professional personnel from the uncertified facilities to their staff; and the assumption that HEW may have the authority to mandate assignment as a condition for direct reimbursement to physicians, although it chooses not to use this authority "at this time."

The Council must also emphasize that the primary area of concern for the Association thus far has been the impact of Medicare approaches on physicians treating patients in maintenance dialysis. Little has been discussed in the area of the program affecting transplantation, and the Council urges any physicians encountering difficulties with the program in that area to bring the matter to the Council's attention for discussion, as appropriate, with other bodies and organizations within and outside the Association, and further action, as needed.

The Council intends to continue its monitoring of the Medicare ESRD program, and will report again to the House at the 1974 Clinical Convention.

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BOOKS RECEIVED

The receipt of the following books is acknowledged and this listing must be regarded as sufficient return for the courtesy of the sender. Books that appear to be of particular interest will be reviewed as space permits.

Science Year. The World Book Science Annual. A Review of Science and Technology During the 1973 School Year. 433 pp. Chicago, London, Paris, Rome, Stuttgart, Sydney, Tokyo, Toronto: Field Enterprises Educational Corporation, 1974. No price given.

Frontiers Of Science 1, by S. T. Butler and Robert Raymond. 64 pp. New York: Doubleday, 1974. $1.95.

Frontiers Of Science 2, Introduction to Modern Medicine by S. T. Butler and Robert Raymond. 64 pp. New York: Doubleday, 1973. $1.95.

The Greatest Adventure. Basic Research That Shapes Our Lives by Eugene H. Kone and Helene J. Jordon. 304 pp. 78 illustrations. New York: The Rockefeller University Press, 1974. $9.80.

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Artificial Insemination: The Medical Profession and Public Policy

Mark S. Frankel, Ph.D.

There is much talk today about the "new biology" and its impact on the practice of medicine. Techniques for modifying behavior and "creating" new life, not yet fully developed, are already viewed by many as threats to the traditional role of medicine. The application of these emerging technologies, it is said, will generate a series of profound ethical, legal, and social problems for the medical practitioner as well as for the larger social community. While such claims may well be valid, it is a fairly old medical technology, one that can be traced back centuries, which has created for the physician and his patients an unsatisfactory and, in some cases, unhealthy situation. I am referring to artificial insemination (A.I.), a medical procedure used to introduce semen into the female vagina, cervical canal, or uterus by mechanical means in order to induce pregnancy. A.I. is generally of three types, differentiated according to the source of the semen: (1) homologous insemination (A.I.H.), whereby the semen used is from the husband; (2) heterologous insemination (A.I.D.), when the semen comes from a third-party donor; and (3) A.I.H.D., which combines the husband's semen with that of a donor.

The first reported use of A.I. in humans was in 1799, when England's John Hunter supervised a successful case of A.I.H. It was not until 1884, however, that the first successful A.I.D. was performed. In recent years, the practice of A.I. has grown considerably, with estimates ranging from 2,000 to 10,000 such conceptions annually in this country. Typical medical reasons for using A.I.H. include physical or psychological difficulties which preclude cervical insemination through intercourse and some cases of oligospermia (deficient sperm count), whereby a number of ejaculates are pooled so that the spermatozoa can be separated from the semen and subsequently inseminated in concentrated form. This latter procedure, however, has an extremely low success rate. A.I.D. is medically indicated in instances of male sterility, of Rh incompatibility, when the husband is a carrier of hereditary disease, and in most cases of oligospermia. Applying these criteria to those couples experiencing an infertility problem due to the male, approximately 10-15 percent of all marriages in the United States would be potential candidates for A.I. As I will discuss later, there are other prospective uses of A.I., such as for the achievement of certain eugenic goals. In such instances, however, what was once a medical procedure becomes an instrument for social policy and raises a host of complex ethical and public-policy questions. Even without these new applications, the practice of A.I. creates several unresolved problems. It is to these that I now turn and for which I will introduce certain policy recommendations.

The Legal Status of A.I.

If husband and wife consent to the procedure, A.I.H. presents no real legal difficulties. Critical legal problems arise, however, when a donor's semen is used. I will focus on two of the more visible legal issues: the question of the child's legitimacy and informed consent. In both cases, the responsibility of the physician is poorly defined and the patient, donor, and prospective child are all placed in a position characterized by uncertainty and inequity. This situation has been created by a series of inconsistent court rulings and the absence of clear legislative enactments. Since 1948, there have been six separate judicial decisions on A.I.D., with three of the courts directly considering the question of the child's legitimacy. One court found the child to be legitimate, while the other two declared the child illegitimate. In the most recent decision, however, the Supreme Court of California, though not ruling directly on the question of legitimacy, stated that public policy favors legitimation and that the subject was one requiring legislative action. Unfortunately, the states have failed to enact clarifying statutes. Only three—Georgia, Kansas, and Oklahoma—have statutes which legitimize the child born as a result of A.I. Thus, in those states which have not adopted similar legislation, there is always the possibility that a court may declare the A.I.D. child illegitimate and the procedure itself illegal and contrary to public policy.

In order to circumvent this difficulty, the physician will often record the husband's name on the birth certificate as the child's father. This raises another legal issue, however. Is the physician guilty of fraud by executing a birth certificate while withholding the information that the mother's husband is not the

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natural father of the child? To avoid possible liability, the physician performing the insemination usually refers the patient to another physician for delivery, with the latter physician unaware of how the child was conceived. While this act may avoid certain legal difficulties, such deception, undesirable in itself, raises a serious question of medical ethics. Is it ethical for a physician to ask a colleague to deliver an A.I.D. child in order to avoid his having to complete a birth certificate which he knows to contain false information? Thus, because of A.I.'s ambiguous legal status, the physician often finds himself in the throes of an ethical dilemma.

To protect the rights and welfare of all parties involved in A.I., a consent agreement should be implemented. In addition to providing a measure of legal protection, such an agreement is also good ethical practice. The emotional and social consequences that can result from donor insemination and its uncertain legal status are sufficient reasons for instituting appropriate consent procedures. Furthermore, the possibility that infectious and genetic diseases may be transmitted is even more reason to ensure that those involved are made fully aware of the potential consequences and that their consent be obtained.

As a minimum requirement, informed consent should include: (1) an understanding by couples that there is no "guarantee" that artificial insemination will result in pregnancy. This is especially important, since infertile couples, particularly the women, will be anxious to consent to almost any procedure which promises them the slightest hope of conception. It is too easy to exploit, even unwittingly, the desperation of a childless couple and it would be cruel and unethical to create false expectations; (2) the possibility of adverse medical and genetic consequences; (3) a donor's expressed willingness to undergo a thorough medical and genetic history and subsequent medical tests; (4) the couple's agreement never to seek to learn the identity of the donor and an agreement on the part of the donor not to seek to learn the identity of any recipient of his semen. This anonymity appears to be necessary in order to protect against undesired transfers of affection by both the recipient and future offspring;[1] (5) an understanding on the part of the donor's wife that her husband's semen will be used for purposes of artificial insemination in a woman other than herself, with the result that her husband may become the father of a child of which she is not the mother; and (6) information regarding the legal implications of using the procedure.

Beyond these requirements for achieving a minimum level of informed consent, other questions emerge. For example, should consent forms enumerate the specific medical tests used to determine the health status of the donor and the quality of his semen? Should a separate consent form be required for each insemination, or will all inseminations with a donor's semen be covered by the initial agreement? And what procedures should be instituted to assure maximum confidentiality of information? Until these and other legal questions are clarified by public policy, the physician who performs the insemination, the husband, the wife, the potential offspring, and the donor are all in an unsatisfactory position with regard to the law.

Donor Selection

For the physician, the selection of donors for A.I.D. posits some of the more troublesome decisions. Since the donor has no control over the use of his semen, ultimate legal and ethical responsibility for how a donor's semen is used now rests squarely with the physician. But what are the nature and limits of this responsibility? What criteria should a physician use in selecting a "suitable" donor? What kind of information about the donor and his semen is the patient entitled to? And more importantly, should these decisions rest solely with the physician?

As now practiced, the methods for donor selection vary widely. Some physicians will attempt to match the donor and recipient with respect to their physical characteristics; some may even use some type of intelligence matching. There are those who require that the donor have a stable marriage and that he be of proven fertility; others, however, assign little importance to these criteria. Some physicians perform screening tests and chromosome analyses for possible genetic defects; others rely on the more-easily obtained medical/genetic history. This variation in the standards and criteria for donor selection creates a situation in which there is no uniform minimum standard of practice upon which prospective parents and the community can rely.

What, then, should society and the law require of the physician in his investigation of a prospective donor? If existing policy is any guide, the results may not be very helpful. Only New York City has established procedures regulating the selection of donors. Among the requirements are: that a donor be given a complete physical examination, including tests for syphilis and gonorrhoea; that the blood of the donor and the recipient be typed for Rh compatibility; and that no person having any genetic disease be used as a donor. The regulations leave many questions unanswered, however. For example, are all genetic diseases to be included? Does the term "genetic disease" include those who carry the disease trait as well as those who are directly afflicted?

What is required is the implementation of a more stringent and uniform set of medical and genetic tests for semen donors. Two examples should illustrate the urgent need for such standards. Sickle-cell anemia is a recessive genetic disease, which is accompanied by severe pain and for which there is no cure. When both parents are carriers of the trait there is a 25 percent risk that their child will manifest the disease. Each child will also have a 25 percent chance of not inheriting the gene; and there is also a 50/50 chance that the child will receive only a single defective gene and thus become a carrier of the genetic trait like both parents. Should this child later marry another carrier, the couple will assume the same risk as his parents of transmitting the disease to the next generation. Thus, in performing A.I., if the semen of a donor who is a carrier of the sickle-cell trait is used to impregnate another carrier of the trait, then they become subject to the risks cited above. The failure on the part of physicians to implement proper screening tests might well have profound consequences not only for the individuals involved, but for society's gene pool as well. The second example concerns a report of the transmission of gonorrhoea by A.I. A donor's fresh semen was used for four inseminations. He was examined carefully on the first three occasions, including a blood test for syphilis, but was not examined prior to the fourth insemination, following which the inseminated female contracted gonorrhoea.

These two examples demonstrate the importance of supplementing medical and genetic histories with proper medical tests. Since the results of a history depend heavily on the knowledge and truthfulness of the donor, a physician who does not perform a medical follow-up to the history necessarily relies on the donor's knowledge and his willingness to impart his knowledge truthfully. However, a donor may not know he is a carrier of a transmittable disease; and reliance upon the honesty of the donor also has its pitfalls. Thus, procedures for screening and selecting donors remain the key factor in controlling the transmission of infectious and genetic diseases through A.I. In the absence of such procedures, the subsequent biological condition of the recipients of the semen and their offspring remain the ultimate test of the biologic and genetic adequacy of the donated semen. In effect, to borrow a phrase from Richard Titmuss, "the patient is the laboratory for testing the quality of 'the gift'."[2] The selection of semen donors without the proper follow-up medical and genetic tests suggests the taking of highly unethical risks from which the inseminated female, her husband, and their potential child might prove the victims.

There are, however, serious difficulties involved in the implementation of more rigorous tests for donor selection. For example, there are at least 60 recessive diseases susceptible to screening tests. Should physicians be required to test for all these diseases? To do so would involve an enormous amount of time and cost. But how do we decide which tests to perform? Their simplicity and cost? The disease's prevalence in the general population? The risk of occurrence? And to what extent will a physician be held liable for his failure to perform certain tests? As in any field of medicine, A.I. is bound to involve some patient ignorance and uncertainty. Under such circumstances, the patient has no choice but to trust those who provide his medical care. Furthermore, the patient establishes this fiduciary relationship with the realization that he and his family will have to bear the biological, social, and economic consequences that may result from any misplaced trust. Because of the scope and nature of these problems, the responsibility for donor selection requires a more active role on the part of society's policy-making institutions.

Artificial Insemination and Family Planning

Whether the request comes from a fertile or infertile couple, the physician has a clear ethical responsibility to provide the best advice he can regarding the alternatives available to them for planning their family. But where does family planning end and biological and social engineering begin? When does A.I. cease to be therapeutic and become a device for social planning? The lines are not always easily drawn. Perhaps I can illustrate this by discussing the role of the physician and his responsibilities with regard to: the selection of couples for A.I.; the use of A.I. for predetermining a child's sex; and A.I. for eugenic purposes.

Selecting Couples: Primary responsibility for selecting couples for A.I. now rests with the individual physician. But little is known about how physicians make their choices and there are no specific professional guidelines or legal codes to guide his decision making. There are some experienced with the procedure who would make A.I. available only to couples who experience a stable marriage and who are emotionally mature. But the concepts of a "stable marriage" and "emotionally mature" are open to a wide latitude of interpretation. More importantly, how qualified is the typical physician to make such judgments? Kleegman has noted that "few physicians have the psychological training to accept this great responsibility; they need help in the choice of [a] couple . . . "[3] It is important, therefore, that professional fertility and genetic counseling services become an integral part of A.I. counseling. Moreover, in selecting couples for A.I., the physician exercises enormous power in deciding what couples will be "allowed" to reproduce. Even if we disregard for the moment the argument that the physician may not be professionally competent to make such a judgment, we must ask ourselves whether he alone should be making that decision.

Sex Predetermination: A.I. might become more popular if techniques for identifying and separating X- and Y-bearing human sperm are perfected. The technique could then be used to help couples choose the sex of their children. But should A.I. be used for this seemingly non-therapeutic purpose? And who should decide? The issue involves more than medical considerations. Some sociologists have predicted that the free use of sex determination techniques would result in an inbalanced sex ratio (in favor of males) and an altering of birth order patterns, with both effects generating serious social and behavioral consequences. The availability of sex predetermination techniques also raises questions about the ethical propriety of distributing non-essential but highly valued medical resources. And what alternatives should be available to the physician and a couple if an "accident" occurs and, through amniocentesis, they discover that the intended boy is really a girl? Would abortion be an acceptable procedure simply because the child is of the "wrong" sex? Until some social consensus is reached regarding the use of A.I., the physician has no ethical obligation to use the procedure for other than therapeutic purposes.

Eugenic Goals: By carefully selecting donors with regard to their genetic qualities, A.I. could make available a wide range of genetic material for selection independent of time. The most vocal proponent of this idea was the late biologist Herman Muller, who suggested that donors be chosen who are the "most truly outstanding and eminently worthy personalities known."[4] While there is a sound ethical basis for using A.I. to prevent the birth of a genetically defective child (negative eugenics), it would be clearly unethical for the physician to use A.I. as a means of breeding in "desirable" traits (positive eugenics). We still know very little about the interaction between the environment and our genetic endowment to be able to "guarantee" the results. Furthermore, there is the very serious problem of determining those human qualities that are to be considered "desirable", especially with regard to future generations who will live in different physical and social environments. It is one thing to apply A.I.D. as therapy for the involuntarily childless; it is quite another to use it to "improve" the human race.

Professional Ethics and Public Policy

A change in policy is often required when new technologies are developed and implemented. Preexisting approaches were not designed with the new technology in mind and are frequently inadequate to cope with the consequences which result from new technological developments. Such is the case with A.I., a technology in search of a policy. As long as the legal status of A.I. remains unclarified by public policy, medical needs will either go unmet or be satisfied in a climate of deceit and inequity. Furthermore, the legal uncertainties also produce tension between professional ethics and the law. For example, should a physician initiate discussion of A.I.D. when he believes that the patient may be ignorant of the procedure? And if a physician does not normally perform A.I.D. as part of his medical practice, should he refer patients to a colleague who does perform such a service?

As an initial step toward resolving many of the existing legal and ethical dilemmas, state legislatures should enact statutes which would declare A.I.D., when performed by qualified medical personnel, a lawful practice and a child so born legitimate. Surely no public purpose is served by stigmatizing such a child as illegitimate. A Panel of the British Medical Association apparently saw the illogic of this when it recommended that an A.I.D. child be declared legitimate and that donor insemination be made generally available within the British National Health Service.[5] All that need be said is that a child conceived by A.I.D. with the consent of the husband and wife shall be accepted as a naturally conceived legitimate child. Such a step would also help resolve other legal issues, such as those pertaining to the child's inheritance rights and the responsibility for child support.

In the area of public health, the states have traditionally assumed a valid role in safeguarding the public against potential health hazards. The responsibility for donor selection, while continuing to rest with the physician, requires more precise legislative definition. As long as there is the possibility of transmitting infectious and/or genetic diseases through A.I., the public interest requires that proper protective measures be instituted. In constructing such measures, consideration should be given to: (1) the medical and genetic tests which will be required of all donors; (2) those qualities or conditions which would make a person an unacceptable donor; and (3) the qualifications required of the personnel and laboratory performing the requisite tests.

A caveat should be entered here against the construction of overly rigid and strict standards. Any set of criteria should be flexible enough to take into account new advances in medical science and technology. What is clear, however, is that a greater public interest would be served by a more rational and orderly approach to the formulation of donor selection standards. Furthermore, it is imperative that such standards be adopted in a consistent manner across all states. Otherwise, the parties involved may experience even greater uncertainty as they move from state to state. Precedent already exists at the state level for such consistency and cooperation in the form of the Uniform Anatomical Gift Act.

To stress the importance of legislative action is not to exclude a very positive role for the medical profession in the evolution of A.I. policy. This role is especially critical in counseling for family planning where ethical guidelines are needed regarding the physician's use and dissemination of A.I. information and the amount and kinds of information the physician should give the patient regarding the efficacy of A.I. and the source of donor semen. The profession also needs to formulate *medical* criteria which would guide physicians in their selection of A.I. couples. By doing so, couples will be treated more equitably and a physician's judgment will be based more on medical evidence than on criteria which may or may not be related to the patient's therapeutic needs. I am suggesting, therefore, that it is not within the profession's purview to establish *social* criteria for A.I. For example, a physician should not reject a couple's request for A.I. simply because he believes that they would not be "good" parents. Society has certainly not granted him such authority. A similar argument may also be made regarding the physician's role in performing A.I. to satisfy a couple's desire for a child of a certain sex or for eugenic purposes. Until society establishes policy governing the use of A.I. in these instances, the physician's proper role is and must be to act in the best therapeutic interests of his patients. When A.I. is performed for other than therapeutic reasons, we move from the field of medicine to the field of social engineering, a field in which the physician's qualifications are open to question. This places the ultimate burden upon society—to develop appropriate public policy. In the meantime, the medical profession can do much to make the policy-making process more informed and more sensitive to the needs of those involved. Ethical guidelines governing the use of A.I. in family planning are urgently needed. Such guidelines will help to define more clearly the physician's proper role and to assure, as much as possible, that the patient's needs are met justly and equitably. The guidelines also will give the medical profession a more powerful voice in determination of future A.I. policy.

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Human Artificial Insemination

Report of the Judicial Council of the AMA to the House of Delegates, Adopted, June 1974.

Human artificial insemination has been a part of the American physician's medical armamentarium for half a century or more. In that time an untold number of women have become pregnant and borne children as a result of the procedure. The procedure has been used to overcome natural impediments to conception.

It is to the credit of American physicians that complaints of ethical infractions have been absent in this delicate, sensitive human procedure. Nonetheless, in view of the concern of members of the House of Delegates of the American Medical Association and because of the recent experience of the British Medical Association, a statement of ethical principles relating to human artificial insemination is timely.

The ethical issues in the procedure of human artificial insemination are, of course, the same as in any other medical or surgical procedure. *The nature of the procedure,* however, requires emphasis of: (1) the importance of the *concern* the physician must have for his patient, her spouse and the child which may result from the procedure; (2) the need for *consent* arrived at intellectually rather than emotionally; (3) the *competence* of the physician who assumes this unique responsibility; and (4) the need for preservation of *confidentiality* by the physician and his staff.

Concern: Human artificial insemination is a medical procedure used to overcome frustration of a basic biological drive. It should be performed by a physician who is deeply imbued with appreciation of the emotional and psychological aspects of the procedure. The physician must be an advisor and counsellor to the woman and her husband. A warm, friendly but professional concern for the importance of this decision and its accomplishment should characterize the physician in this intimate relationship.

Consent: Even as the physician shows concern for the woman and her desire for motherhood, he must ensure that emotions do not adversely affect those judgments which must be sound and reasoned. Because a family is involved, the patient's spouse must participate in discussions regarding the procedure and its purpose. An additional member of a family involves economics as well as parental responsibilities which should be jointly undertaken by wife and husband.

The procedure directly affects the husband as an individual, as a prospective parent and as spouse of the woman who undergoes the procedure. The consent of both the woman seeking the procedure and her husband must be secured. *This consent must be voluntary and informed.*

Competence: Because human artificial insemination is a medical procedure, the medical profession should exert its influence and efforts to the fullest extent necessary to ensure that the procedure is performed only by individuals licensed to practice medicine or osteopathy. Physicians without special knowledge and competence in the field should refrain from engaging in the procedure. Referrals to fellow physicians engaged in this practice and who possess the requisite knowledge regarding the selection of proper donors is ethically mandatory.

Confidentiality: The utmost medical secrecy by the attending physician and his entire staff is essential in all aspects of the procedure. All medical records regarding the procedure must be securely protected from invasion.

In addition to the above guidelines, the Judicial Council feels obligated to comment on (a) genetic screening and (b) use of frozen semen in connection with this procedure.

Knowledge is developing daily in the field of genetics. Possession of current knowledge of genetics and application of this knowledge are expected of the physician who engages in the practice of human artificial insemination. In the past, physicians who performed this procedure attempted to ensure, insofar as possible, that the child conceived of an artificial insemination would possess physical characteristics consonant with those of the mother and her husband. Now the genetic background of the donor must also be known to the extent currently possible. Selecting and screening donors to control the transmission of infectious and genetic disease insofar as current knowledge permits is ethically required.

In using frozen semen, adequate physical, mental and genetic examinations must have been made of the donor. The use of frozen human sperm is relatively new; it must still be recognized as experimental. There must be concern about the insemination and equal concern about the child resulting from the use of frozen, stored human sperm. The mandate *primum non nocere* is particularly applicable.

It must be remembered by the physician and explained by him to the prospective parents that any child conceived and born of an artificial insemination is possessed of and entitled to all the rights of a child conceived naturally.

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Family Medicine
Back Through the Ivory Gates

Alexander Berger, M.D. and John Donnelly, M.D.

In the Beginning Asclepius created the G.P. and He saw that he was good, kind, available, personal and respected.

Many of the physicians who read this journal have memories of their own personal physician; perhaps a classmate or a professional friend who was a G.P. They, however, have no memories of their university professor who was a G.P., because in the wake of the Flexner report in 1910, the G.P. was expelled through the gates of the ivory towers of academic medicine to toil in the sweat of his brow, to care for his patients, but not to produce new medical graduates in his image.

In the wake of the Flexner report, "scientific medicine" was born. The biological sciences have enabled the physician to acquire an impressive understanding of intra-organismic processes and structures. They have helped medicine to move from the organism to the organ, from the organ to the cell and from the cell to its molecular substructure. Scientific medicine has achieved ever increasing insights into the process of illness and a certain capacity to counter it. In the process, a huge body of knowledge was developed, and an increasingly fine division of expertise in the form of intra-professional specialties and subspecialties.

For decades, medical students emulating their role models (the eminent subspecialist researchers) went into tertiary care as the only avenue into "scientific medicine." Most of them were, and are kind, personal, respected and available to patients referred to them for specialized care. But with the G.P. rapidly disappearing from the scene, who is to do the caring, who is to do the referring, and who is to man the lonely outposts in rural America and even rural Connecticut. (At present there are over thirty communities in this state who are searching for a general physician in vain.) Floods of patients with ordinary illnesses descend in ever increasing numbers on the "emergency" rooms of urban hospitals. They seek the care they no longer find in the hands of a "family physician." They represent the inner city dweller, the rural population and even suburbia where finding a doctor to care for the family or to deal with an unexpected illness is often impossible.

The American public and its representatives, 1) Citizens Commission on Graduate Medical Education (Millis Report), and, 2) Ad Hoc Committee of Council on Medical Education (AMA) has called for the creation or recreation of a physician who will be a specialist in translating medical science into effective delivery of patient care. A physician who will be a competent clinician with sound knowledge in the principles of scientific medicine, able to deliver excellent primary care in a family setting, knowing when, why, whom and how to call for help from his colleagues trained in tertiary care. A physician concerned with the entire spectrum of "health care:" the achievement of health, the maintenance and the treatment of illness and disease whether it be medical, psychological or social. In short, a physician who will contract with the family to be their advisor in all matters related to health over a prolonged period of time, who will be able, by virtue of his past and continuing training, to personally handle over 90% of problems presented to him and to participate in the care of the rest in cooperation with other specialists, physicians, psychologists, social workers, etc.

The family physician of the future is being trained at present in over 190 programs across the country. His training is innovative to a large extent since innovation comes easily to a young specialty. Other programs in primary care have anchors in the past that delay change in course.

No sooner had the first seeds of Family Medicine programs taken root than medical students started flocking to them. Over 2,000 applicants were counted for the academic year 1974/1975 whereas only 1,200 first year openings in approved Family Practice residencies are available at present. Student pressures and the motivation of many educators who have the courage and dedication for necessary change have been instrumental in opening the ivory gates to the generalist once again. Departments and divisions of Family Medicine are developing in ever increasing numbers of medical schools, 49 at last count. They have succeeded rather rapidly in becoming an integral part of the academic activities of the school and developing meaningful input into

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all phases of educational endeavor; undergraduate, graduate and post graduate.

Here in Connecticut, graduate education in Family Medicine begins in July when eleven residents begin their training; six at the University of Connecticut and five at Middlesex Memorial Hospital, an affiliate of the University of Connecticut. The training program will be conducted in three different training sites simultaneously: 1) The inpatient teaching services of University and community hospitals where the resident learns the latest knowledge and skills needed for the care of complicated, critical and chronic illnesses. Repeated rotations through the major inpatient services during the entire three years of residency are designed to reinforce and deepen the achieved competence. 2) The model practice unit where he or she learns to care for ambulatory patients and to develop an ongoing relationship with a number of families in the fashion that he/she will follow through his/her professional career. 3) The home, where the resident learns to appreciate the social setting of his/her patient families and the interpersonal dynamics which are so closely related to the family's health and disease.

The hospital training has been the least difficult to fashion, thanks to the current existence of excellent programs in major teaching programs of the region.

The office training has created misunderstandings for it represents a role model, not a working model. Twelve residents in a Family Medicine program can only care for four or five thousand patients due to the educational structure of the office; and the office must be a separate, identifiable structure with separate billing, records and staff. The service delivered to the patients is, however, realistic and of excellent quality. By the end of their third year, the resident can slip into a greater volume practice with a programmed reminder to define time for relaxation, recreation and continuing education.[1]

In the recreation of the home call, the resident, like the pre-Flexner G.P., learns to broaden his data base, to identify problems not yet defined, and to ground the logical planning of health care for all members of a family on a foundation of reality.

As a composite, the graduate programs in Family Medicine have several goals in common. One is to begin to meet the primary care needs of our people. Another is to provide excellent training for students who wish to practice Family Medicine.

A third goal, specifically applicable to a university based program, relates to the university resources and capacities in research and education. "Family Medicine" in contrast to "Family Practice" is a new field of study, an academic discipline concerned with the elements and processes governing health and disease in human beings in the context of their most intimate social unit, the family. At the University of Connecticut there is a nucleus of scientists within the Department of Community Medicine and Health Care whose skills and interests might be most valuable in the planning and implementing of meaningful research in "Family Medicine."

The disappearance of the generalist from the American medical school scene has been in part related to his lack of formal training in the field of education. Efforts to bring him back into the medical schools will be unsuccessful unless he is well trained as both a specialist in Family Medicine and as an educator. At the University of Connecticut, special courses are being planned for residents who show interest in an academic career in Family Medicine. These courses will be given by the Department of Research in Health Education and will be designed to acquaint the Family Practice resident with educational philosophy and skills. He will thus become a better teacher to more junior residents and to students during his residency; to hospital house staff and to medical students when he starts his practice. Thus re-enters the generalist into the ivory tower.

But the gates will not be closed behind him isolating him from his colleagues in practice or from the community hospitals. Since the field of interest of Family Medicine is patient care, its laboratory is the community, the community hospital and the physician's office.

The University of Connecticut program in Family Medicine has been and will be available for advice and assistance to all hospitals in the state, large or small, in any efforts they might make to establish a Family Practice residency. Affiliation agreements will be offered to such hospitals should this be desirable to them regardless of their geographic location.

Practicing family physicians will be invited to become part of the Family Practice clinical faculty and will be able to participate in the education of University residents and students both in their office setting and at the University based model practice unit and inpatient service.

Student interest in Family Medicine is great and growing. Support from some of the most respected people in academe is being increasingly expressed at medical meetings and enthusiastic cooperation on the part of many of our colleagues in practice is being given.

Thus it seems that in the not too distant future, the family physician will again occupy his deserved position in the heart of the health care system.

Remembrance of Things Present

Adrian M. Ostfeld, M.D.

Don't confuse me with the lack of data; my mind is already made up. With this small variation on a cliché, I have epitomized the position I am taking in this commentary. I shall write what I believe about the medical students I know today—in all the schools I know. I have no defense for my opinions other than my unsystematic experience.

We are much too concerned with what medical schools do to the character and beliefs of the student. They do little. True, they transmit some information and some modes of thinking about facts. But the medical student who graduates is little changed as a human being from the freshman medical student just admitted to school.

Most entering freshman have no clear idea of what the doctor's job is. Some have worked in emergency rooms or hospital laboratories. Fewer have physician parents. Far more develop their concept of the physician's work from TV, from novels, and from the press. Thirty or 40 years ago, when communicable disease was common and house calls were still made, most children saw a doctor when they were ill and noted what he did and were aware that he usually made them feel better. Now they see the G.P. or pediatrician in his office, usually when they are well, to receive immunizations from his nurse or to get well child checkups—and they didn't even see this very often. The meeting of the child with the doctor during ages 6-12 when career decisions begin to be made, occurs in an office, when the child usually feels well and often with little contact between the doctor and the child. No wonder the pre-teen for whom medicine beckons as a career gets his information about the doctor's job from sources other than the doctor. Furthermore, I have yet to meet a college pre-medical advisor who really knows medical schools or medical careers well and that doesn't help either.

About half of entering freshman have negative ideas about organized medicine. Having just made it into school and knowing many who didn't, the first crime they usually pin on the AMA is keeping medical school classes small to avoid competition. When I tell them that the AMA has nothing to do with medical school class size, I am often not believed. When I tell them that medical school faculties and administrations are the ones who determine medical school size, some are incredulous. They have heard somewhere that the AMA is the villain and the idea dies hard. (Don't assume that I am myself in favor of larger medical school classes.)

It is true that the liberal and radical medical student organizations are dead. The two commonest reasons I hear for this demise are: 1. "How can you fight the establishment when you can't even identify it. I used to think the establishment was the deans, the mayors, the police chiefs. Now I know none of these people have real power. But I don't know who the hell really has the power and I'm tired of trying to find out." 2. "It's just too hard to change anything. You work and work and you think you're making a change and the whole damn thing collapses on you." So it is true that present medical students are not militant, not activist, and not fighting to bring change in either the political, the social, or the health care arena. They accept what they find even if they don't like it.

The present medical student does not feel threatened by the whirlwind in health care. The legislative changes, PSRO, the growing power of the American Hospital Association and the Association of American Medical Colleges, the rise of the nurse practitioner and the physician's assistant—all this doesn't trouble the student very much. He accepts it and seems neither critical nor favorable.

Then there are currents and cross currents in the medical school streams which I can identify for the moment but whose future I can't predict. There are more students than before who view themselves as human biologists and have contempt for social and psychological concepts. More often than not, the pediatrics clerkship is to learn about pediatrics, the medicine clerkship to learn medicine and learning about people is almost irrelevant. Even in psychiatry, the raison d'être is to learn about a few syndromes and a few drugs. Making a psychiatric diagnosis is confused with learning sensitivity to human needs. But I'm not surprised at all this. These are the kinds of students we admit. Why do we expect them to develop capacities they never had? We can only teach them facts and procedures they didn't know before.

Minority students, Blacks and women, are getting admitted in increasing numbers but some minority groups are not, like the Chicanos, Puerto Ricans and Indians. Outwardly the minority students behave like the rest of the class. They keep quiet, work hard, and don't argue much in class about health or social issues. The Black students may show a little more

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interest in Plumbism, or high blood pressure or sickle cell anemia than the others but not much more. I haven't yet decided if their placid exteriors are real or not. If I had to bet, I'd bet it was a facade and the drive to improve the life of people is there. But, as I don't have to bet, I don't have to take a position—and I'm not sure.

By the fourth year, many medical students see that their profession is painting itself into a corner. They know that doctor (derived from doceo [to teach]) is a role which others are filling as the physician retreats into more detailed technical procedures. They don't see anyone in medical school value the role of counsellor, friend, teacher, long term confidant. And they don't seem, as a group, bothered by this. The more procedures and better drugs the doctor has, the less he needs to offer of himself. This paradox doesn't keep the students I know up at night. Well, that isn't quite true. A few are interested in family practice, a few at Yale and more at other schools. This number may be growing but it is very difficult to tell—perhaps too early to tell.

There is one surprising exception to the students lack of concern about issues they perceive as peripheral to medicine. There is a large and serious interest in ethical and legal issues in the health professions. The use of man as an experimental subject, the onset of vitality in the fetus or newborn, abortion laws, the ethics of organ transplantation, the determination of the moment of death—all these intrigue many medical students. The use of extensive life support systems on the terminally ill and often comatose patient, and even the issue of euthanasia enter frequently into their informal discussions. And they are beginning to think about the potential for directing human evolution that genetics may put into our hands. These are the areas in which the intellectual ferment among medical students is brewing. Debates about the quality of medical care and the best way to provide it—so common 5 years ago—are almost never heard anymore.

Todays medical students are brighter, more forthright, and more outspoken than their predecessors. Faculty are viewed as people, sometimes right, sometimes wrong. The demigod professor, the beau ideal is gone. Halstead would be faced with his addiction, Osler with his celibacy by todays students. There is no hesitancy to criticize faculty and teaching, usually honestly and carefully, but always vigorously.

In spite of considerable pressure, largely exerted indirectly, to enter full time academic careers, only a minority of students actively consider this decision. Almost all want to have an office and take care of patients. And they want to take care of patients one at a time. They are not much concerned about the health of groups of people. But here again we see the results of the kind of people we admit to medical schools and should recognize again, how little we can change them.

In the late 1950s and through the 60s, we read a number of articles which dealt with the motivations of students in wanting medicine as a career. Some papers implied that the real motive was a drive to have control over the lives of others, other papers stressed the desire for prestige or money and still others, an unconscious fear of illness and death. I used to believe all that was important. I don't now. A person may do a good job for the strangest reasons in the world. We can evaluate and certify our students on the basis of what they know and what they can do. But their motives, even if apparent, are irrelevant. It's the job they do that counts.

Amniocentesis, a Forerunner of the Genetic Fix

Amitai Etzioni and Nancy Castleman

Eugenics—the deliberate use of genetic tools for the advancement of societal purposes—is frequently associated with Nazi "Aryan purification" policies. More recently, it has been linked with the revived thesis that genes are responsible for IQ differences between human races. And yet, the American nation is about to embark on a major active genetic policy.

At the forefront of this new genetic intervention is neither the development of "test tube babies" (no such baby has yet been so hatched) nor cloning (so far, only carrots and frogs have been asexually reproduced, i.e. genetically copied or "xeroxed"). The crucial new technique is amniocentesis, which has already been undergone by several thousand American women. A quantity of amniotic fluid (in which the fetus floats) is extracted at about the 12th to 16th week of pregnancy, and fetal cells are cultured and analysed. In this way, information can be obtained about the genetic make-up of the fetus. When the fetus is found to be afflicted with a genetically caused illness (of which mongolism is the most widely known), it can be aborted. Frequently, the parents then follow up with another pregnancy, which is again tested, until a child free of inherited disease is conceived.

One can easily understand the reasons why many parents are all too anxious to gain the benefits of such genetic interventions. The majority of women would rather undergo the test (despite some dangers it entails), and if need be have an abortion, rather than bear a deformed child. (Very few choose the opposite course, because of religious convictions or because they can cope with deformity more readily than other parents.) A mongoloid child is highly likely to be mentally retarded and to suffer malfunction of many vital organs; heart deformities and acute leukemia are common. In many cases, sexual organs do not develop normally. Early death is often the prognosis.

Aside from the agonies of the child, we must also consider the pain and often guilt suffered by the parents (including frequent strain on the marriage caused by husbands and wives accusing each other of being to blame, and by reduced interest in intercourse) and the guilt complexes of the healthy siblings. Finally, there are the gargantuan medical bills.

Despite the sinister overtones of genetic intervention, therefore, we, as a society, must be willing to assess both the dangers and opportunities such new techniques offer as, gradually, natural selection is being replaced by human decisions. The taboo against eugenics must be re-examined, not with an eye toward turning to coercive, governmental interventions, to force people to breed (or not to breed) according to official specifications; but to provide the genetic services for those people who seek them—and maybe also to voluntarily promote genetic interventions that are clearly in the public interest.

The role that the medical profession will play in this regard will be of great importance. In order to discover the attitudes of gynecologists and obstetricians toward amniocentesis, the forerunner of other genetic interventions, we mailed questionnaires to a random sample of 500 certified gynecologists and obstetricians in the United States who were drawn from the *Directory of Medical Specialists, 1972-1973* in September, 1973. The response rate was 40%.

Ninety percent of the physicians who responded would not recommend amniocentesis for a pregnant woman of average age with no history of genetic illness. Some of the physicians mentioned the use of the test late in pregnancy in cases where there was some chance of an Rh problem, but only 5% said that they would recommend it for the discovery of genetic impairments early in pregnancy. (Five percent did not answer this question.) Thus, the vast majority of gynecologists and obstetricians do not recommend the use of amniocentesis on a routine basis.

As has been reported in *Genetic Fix,* and elsewhere, the incidence of infants born with genetic defects rises with the age of the mother. For example, while one mongoloid is born out of every 600 births in the United States, one out of every 80 births to women between 40 and 44 years of age is a mon-

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goloid, one in 40 for ages 44 and up. The physicians were therefore asked specifically for the use of amniocentesis for women over 40. While the majority, 59%, do recommend the test to women in this age group, almost one-third, 31%, do not. (Eleven percent did not answer this question.)

There is one overriding factor which helps to explain why some doctors do not recommend amniocentesis to women over 40. Of those who do not recommend the test to this group of women, 64% of them come from the southern and midwestern states. Twenty percent of those who do not recommend the test are from the northeastern states and 16% are from the western states. Holding constant for the size of the community in which the physicians practice, we find no significant differences. Thus, it seems that wherever they practice, be it a large city or a small town, the physicians in the South and Midwest are less likely to recommend the test. And, while there are updated physicians in all parts of the country, it seems that fewer of them reside in the South and Midwest.

The most frequently given reason for not recommending amniocentesis to women over 40 was that the risks associated with the test were too high. Some doctors would only recommend it if there was a past history of genetic defects. Others would discuss it only at the patient's request. A few gave their own opposition to abortion as their reason for not recommending amniocentesis. Still others mentioned the cost of the tests or the fact that the odds were in favor of a normal child—that is, the test was not justified because of a higher incidence of genetic defects among the children of women over 40. One felt that the test was not worth the time; another that the findings were not conclusive; and one felt that women would not accept it.

In short, almost all of the physicians who responded do not recommend amniocentesis to pregnant women of average age. And, while the majority do recommend it to women over 40, almost one-third do not. Based on both these findings *and* on the fact that this technique is now possible, a number of questions must be raised.

Public policy question number one is: should more be done to provide amniocentesis for those who could benefit from it—i.e., many if not all pregnant women? Are the risks entailed by the test itself (a 1 per cent to 2 per cent probability of a miscarriage and rare incidences of more serious complications) too high for younger mothers? Should more doctors be trained, and above all, more laboratories set up to provide for the test, in a crash national program?

The individual angle is relatively straightforward. Once a couple has been informed about the test, it should be up to them to decide whether or not to use it. But there is also a relevant and far from trivial public interest. The consequences of not using amniocentesis are easily calculated. Without the test, for example, roughly 57,340 to 82,680 mongoloid children will be born in the United States between 1970 and 1980. (The numbers range so widely because data on the incidences of the illnesses range widely, as do projections on future birth rates.) The costs to society are enormous. By itself, the care of mongoloid children (which many parents dump on public institutions) is estimated to run to $1.7 billion a year in the United States. Aside from monies, scarce medical resources are used up caring for these children.

Particularly sad is the fact that considerable resources go not toward cures but chiefly to caretaking and amelioration. While no one in his or her right mind would dream of forcing even one woman to submit to abortion to save funds or medical resources, the question is whether the public is or is not entitled to promote, strictly through educational and voluntary means, consideration of the procedure? Is this so different from the birth control devices society promotes?

Many people are unaware of the opportunities (and risks) of amniocentesis, and, as we have shown, many doctors shy away from it. The time has surely arrived when health authorities should launch programs to inform the public of the procedure and encourage its consideration by all prospective parents. Indeed, unless a current evaluation study, which is being sponsored by the U.S. Department of Health, Education and Welfare, raises new questions about the safety and efficiency of amniocentesis, the technique may soon acquire the status of polio immunization.

It is time to re-examine the taboo against genetic intervention. We must continue to abhor forced eugenics, provide opportunities for all who seek genetic services to have them, and educate the public to the powers and shortcomings of such techniques.

Marriage Problems and the Medical Professional

Robert S. Redmount, J.D., Ph.D.

This is the second of two articles on the subject of marriage consultation by professionals and, especially, physicians. The first article, titled "Marriage Problems and Professional Intervention," appeared in the August issue of Connecticut Medicine.

To the medical professional, his patient's marriage problems are usually an incidental and ancillary matter. They come to his attention because of the press of the patient's feelings conjoining with the aura of the doctor as a helpful, kind, understanding and/or sagacious individual. The physician may not regard marriage problems as within his professional province. Nonetheless, his understanding of the problem, his manner of handling it, and the thought and recommendation reflected to the patient can be important in their consequences to the patient.

Mostly, the medical professional is inclined to do very little with his patient's marriage problems. He may try to pass the matter off with some general encouragement or suggestion aimed at reassuring the patient and perhaps minimizing the matter. He does not really want to become involved in a maze of feelings and issues where he may not have the time, disposition or skills to offer effective counsel. The patient, however, perhaps because of the doctor's special role as a helper and healer on intimate matters, may reveal more and press for more help than would normally be the case in his dealings with professionals. This may be reflected not only in his self-concern but in his projections about what is wrong with the other spouse and what can and should be done about it. Thus positioned by the patient, the doctor may refer him to a marriage counselor or mental health worker of whom he knows and in whom he has confidence. If he is empathic toward psychiatry and does not deprecate this branch of medicine as unscientific and unworthy of professional stature in the field he may refer his patient to his brother professional in the psychiatric field. This may be less because the psychiatrist is identified as working with marital problems than because of recognition of psychiatry as the medical profession's repository for dealing with the psychological and human relations problems of clients and of the profession itself.

Some physicians, in an effort to aid their patients and sustain their helping and curing image with the latter, may offer medical prescription to relieve the patient's anxiety or depression. This may be accompanied by verbal support and simple suggestions to the patient in how to treat or deal with his marriage. Giving medicine is the panacea of the medical profession and may be grasped for relief by the patient though it is less likely that this treatment base will indeed cure marriage problems. Medical examination may also be used to provide reassurance. Negative findings related to sexual functioning may suggest that there is no impediment to marriage, on the thesis that the substantial basis for marriage is good sexual relationship. Reassurance about sex heals the marriage or at least takes the focus for consultation away from the physician. Where the physician is confronted with "what should we do about my spouse," he may find himself vicariously diagnosing the spouse and simultaneously offering comfort to his patient. This may be distortion rather than resolution for marriage matters.

The alternative for the medical professional is to seriously contemplate his role and his professional offering in marriage problems when patients present such matters for his opinion or professional consultation. Recognition that the medical professional offers counsel in marriage as an extension of his professional practice exists in the training programs that have been developed for physicians on marriage consultation. These programs exist in some medical school curricula and departments as well as in postgraduate seminars and institutes. One may contemplate here some of the professional and conceptual issues that are involved in crystallizing a medical professional's service to his patients on marriage matters.

The medical professional might first observe the important distinction between a "person-oriented" and an "object-oriented" approach to marriage problems. In the "person-oriented" view the physician is not so much looking *objectively at the problem* as he is perceiving *empathically with his patient.* It is the doctor's capacity to empathize with the patient and his situation that may determine how the doctor sees and works with his patient's problem. The empathic concern, where the issue is marriage, extends beyond the patient to the other parties who are concerned and involved in the marital disharmony. It is the perceived and felt experience of the parties that is the subject of diagnosis and treat-

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ment. Alternative possibilities and solutions for the marriage are regarded within a subjective framework that stresses relief or satisfaction as experienced by the parties. Professional intervention is in large part a human relations diagnostic and counseling function involving large measures of personal sensitivity and diplomacy. The doctor regards the marriage, not just the individual patient or the physical body, as the subject of consultation.

In the substantially more object-oriented view of marriage matters the emphases are somewhat different. The physician is more directly concerned with the diagnostic and treatment systems that are his most essential professional learning and experience. The patient and his problems are consciously or unconsciously matched against this body of knowledge and skills in an effort to determine problem definition and solution. The patient is an object in dispassionate analysis, not a subject in a moving or important personal experience. Empathy is less important as the patient's problems are put within an objective working system that more or less constitutes the professional's training and experience for problem solving. The view of marriage problems is therefore necessarily narrowed and specialized. In substance, the party's problems get resolved predominantly in terms of the professional's objective competence to understand and handle the matter. The focus of inquiry tends to pass from the party's problems to the professional's competences though this may not be perceived or understood to be the case. The outcome and the reward are rendered acceptable in terms of professional standards of performance though not necessarily in terms of enduring party satisfaction or what is best for the parties.

Clearly, the emphases of both a person-oriented and object-oriented view are important in treating marriages. Doctors *solve people's problems*, especially their physically-based medical problems, but they also *help people to solve their problems*, notably where personal motivation and behavior choice are involved. The doctor is authority but he also shares the decision-making power with his patient. His knowledge, of what to seek and what to do, is important but so is his capacity for "third ear" listening and reflecting with the patient as well as advising the latter. If, as in marriage, party feelings of security or satisfaction are important, then the professional works more closely and continuously with the state of mind and perhaps the underlying dispositions of the parties he serves. He endures and stays with party struggles and uncertainties until the parties feel secure or rewarded. The measure of his skill is patience and personal understanding as much as it is technical knowledge and application. The aim is more in the direction of the best party satisfaction and security achievable under the circumstances, all parties and all matters being considered. Succinct or finite solutions may be as much the exception as the rule, a matter that may be nettling to a scientifically-trained person.

By temperament and training many physicians may have difficulty with the personal and professional requirements in marriage consultation. Physicians are accustomed to being in authority, not sharing authority with their patients, in matters they deal with. They are also more accustomed to dealing with discrete and finite data, and ambigous or "soft" facts are more the exception than the rule. Their focus is relatively more on the internal environment of the patient and relatively less on the patient as an element in a complex of predominantly social and psychological relationships. Medical treatment is characteristically brief or concentrated in terms of demands on the physician's time, involvement and energy. In marriage treatment there is the need for more or less extended and continuous consciousness of the patient(s) and his (their) problems. The ministering professional is more or less constantly attuned and involved in an intensive and complex relationship with his single or multiple patient. The physician, in his contact with patients, deals mostly in terms of brief units of time. In marriage matters, time with the patient is an important dimension of treatment as it permits the patient to "work through" important feelings, thoughts and dispositions that may be critical to the resolution of problems. The economics of medical practice is premised on the principle of many consultations in a relatively brief time span rather than the reverse. This, also, contributes to the aura of "busy-ness" that the physician experiences and he may have limited time or inclination for more extended and intensive involvements with his patients.

Clearly, the professional model for marriage consultation is closer to that of the psychiatrist than the internist or surgeon. Even the psychiatrist, however, may share in many of the demands and dispositions of a medical practice that may not be entirely suited to dealing with marriage problems. The physician, if he purports to deal seriously and substantially with his patients' marriage problems, is faced with a choice. He may expeditiously refer his patient to another professional more expert in marriage matters and better able to accommodate the needs and requirements for consultation. The physician is here exercising the principle that he ought not to meddle in matters to which he is not sufficiently professionally or personally attuned. He does not casually approach or engage in trial-and-error with somebody else's personal experience any more than he would do so with diseases of the body. He may also work collaboratively with the marriage consultant to whom he has referred in a manner that is already familiar to him when he consults with other specialists in his or a related field. Alternatively, the physician may regard his interest and desire for competence in handling marriage matters as a significant aspect of his professional practice. The tenor of professionalism for marriage consultation purposes may then best be achieved in a thorough understanding of the personal counseling process with patients. Personal counseling, in theoretical form, encompasses the relationship between professional and patient, the uses of counseling for diagnostic purposes, and the scope and character of counseling especially as it relates to the resolution of marriage problems. This may include matters that are not alone physical or biological, but also psychological and social, and ethical and legal, and economic and practical. The subject is large and invites considerably more understanding and theoretical exploration than has so far been shown. There is, however, enough knowledge about discrete matters pertaining to marriage and about the professional counseling process to develop a discipline or subdiscipline in marriage counseling for medical students and seminars or workshops for practicing medical professionals.

There are numerous questions and issues to be raised relating to professional-patient relationship, problem diagnosis and treatment in marriage matters. Regarding the professional-patient relationship, one may ask, to what extent is there both personal and professional involvement with the patient? What information does one solicit, offer or withhold with regard to patients, their welfare and their progress in their marital problem? To what extent is authority to be exercised or collaborative decision-making to be sought on various matters in marriage counseling? What kind of "shaping" does the counselor do, consciously or unconsciously, that suggests one feeling or judgment or choice of solution rather than another?

Apropos of the diagnosis of a marriage, among the questions and issues to be raised, one may ask, what appear to be the strengths and limitations of the marriage and the parties to the relationship? How are these perceived and understood? What is to be regarded as symptom as distinguished from substance in understanding the character of a marriage problem? How much of a marriage difficulty is rooted in an "objective" problem, *e.g.*, lack of finances or a physical formation obstructing sexual functioning, and how much reflects differences in perception and ambiguous, misleading or conflicted communication?

On the matter of treating a marriage one needs to ask, what are the capacities and tolerances of the parties in facing their marital problems? What are the alternative strategies and foci that offer the best prospect for problem solution? What are the elements of time and other resources that are required for healing a marriage and how realistically can these requirements be met? What are the alternatives, with what requirement, feasibility and consequence for solutions other than marital reconciliation?

Dealing with marriage problems is a strange kettle of fish when viewed in the context of most major professional practices. It fits in its entirety neither medicine nor law, nor religion nor psychiatry, yet all of these and more have essential contributions to make. Expertise in marriage is in the province of many professionals. There remains the need for diagnosticians and expanded marriage diagnosis and for marriage counselors with a breadth of perspective and counseling skills. To the extent that the medical professional searches and successfully answers many of the questions raised above in regard to his patients' marriage problems he is performing a professional marriage consultation service. He is at the same time developing not only his own but the medical profession's range of competence for aiding patients and he is expanding the public image of and confidence in the work of the doctor.

Address reprint requests to Dr. Redmount at 60 Connolly Parkway, Hamden, Conn. 06514.

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September, 1974

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INFLUENZA VACCINE

INTRODUCTION

Some influenza occurs in the United States every year, but there is great variation in its incidence and geographic extent. Periodically, influenza becomes epidemic. This appears to occur when antibody levels wane or when the antigens of prevalent influenza viruses have changed sufficiently to render the population susceptible. Epidemics caused by type A influenza viruses are more frequent and are generally more severe than those caused by type B.

Inactivated influenza vaccine, the best available means of protection against influenza, has been variably effective, and vaccine-induced antibody appears to be relatively short-lived. Consequently, public health recommendations on influenza immunization in the United States are oriented toward protecting those at greatest risk of serious disease and death by emphasizing the selective vaccination of "high-risk" groups.

Repeated observations during influenza epidemics indicate that mortality is almost completely restricted to the chronically ill and the elderly, especially those persons over age 65. Epidemics caused by type A influenza viruses, but rarely those caused by type B, are notable for inducing mortality in excess of what is normally expected.

Annual vaccination of the "high-risk" group is urged as routine medical practice regardless of the amount of influenza expected in any specific geographic area. In this way, those at particular risk can maintain the highest possible level of protection. Selective vaccination of the "high-risk" group should be emphasized by public health authorities in view of the finding in surveys on immunization that only 10-15 percent of this group are vaccinated each year.

Influenza control through widespread vaccination of the general population is not currently a public health objective for several reasons: the variable effectiveness and short-lived antibody levels with available influenza vaccines; the relatively low attack rates of influenza in community outbreaks; and the low frequency of serious complications from the disease in healthy people in the general population.

INFLUENZA VIRUS VACCINE

Bivalent Vaccine*

The Bureau of Biologics, Food and Drug Administration, reviews influenza vaccine formulation regularly and recommends reformulation with contemporary antigens when indicated. Bivalent influenza vaccine this year will contain a new type A influenza virus representative of currently prevalent "England" strains. Each adult dose of the 1974-75 vaccine will contain not less than 1200 chick cell agglutinating (CCA) units of antigen in the following proportion: 700 CCA units of a type A strain comparable to the prototype, A/Port Chalmers/1/73(H3N2)** and 500 CCA units of a type B strain, B/Hong Kong/5/72. Vaccines from all producers are highly purified and should be relatively free from significant adverse reactions. Minor reactions such as erythema and tenderness at the injection site and low-grade fever can be expected to occur occasionally.

VACCINE USAGE

General Recommendations

Annual vaccination is strongly recommended for persons of all ages who have such chronic conditions as 1) heart disease of any etiology, particularly with mitral stenosis or cardiac insufficiency; 2) chronic bronchopulmonary diseases, such as asthma, chronic bronchitis, bronchiectasis, and emphysema; 3) chronic renal disease; and 4) diabetes mellitus and other chronic metabolic disorders.

Annual vaccination is recommended for older persons, particularly those over age 65 years, because influenza outbreaks are commonly associated with excess mortality in older age groups.

Vaccination may also be considered for persons who provide essential community services if local priorities justify. However, before undertaking such an immunization effort, those responsible should take into account a number of reasonable constraints: difficulties inherent in predicting influenza epidemics, variability in vaccine effectiveness, cost, and availability of vaccine.

Vaccination of patients not at "high-risk" in an attempt to reduce their chances of acquiring influenza is a decision for practicing physicians. The foregoing discussion of influenza and influenza vaccine may be useful in helping to judge the relative merits of vaccination.

Pregnancy is not an indication for influenza vaccination.

Schedule

The primary series of bivalent influenza vaccine has traditionally been 2 doses. Data indicate that with the more potent influenza vaccines available in recent years, the second dose provides little additional benefit. It is, therefore, reasonable to give a single dose of vaccine for either primary or annual booster vaccination. (Dose volumes for adults and children and the recommended route of administration are specified in the manufacturers' package labeling.)

Influenza vaccine should be administered by mid November.

Precautions

Influenza vaccine is prepared from viruses grown in embryonated eggs and should not be administered to persons clearly hypersensitive to egg protein, ingested or injected.

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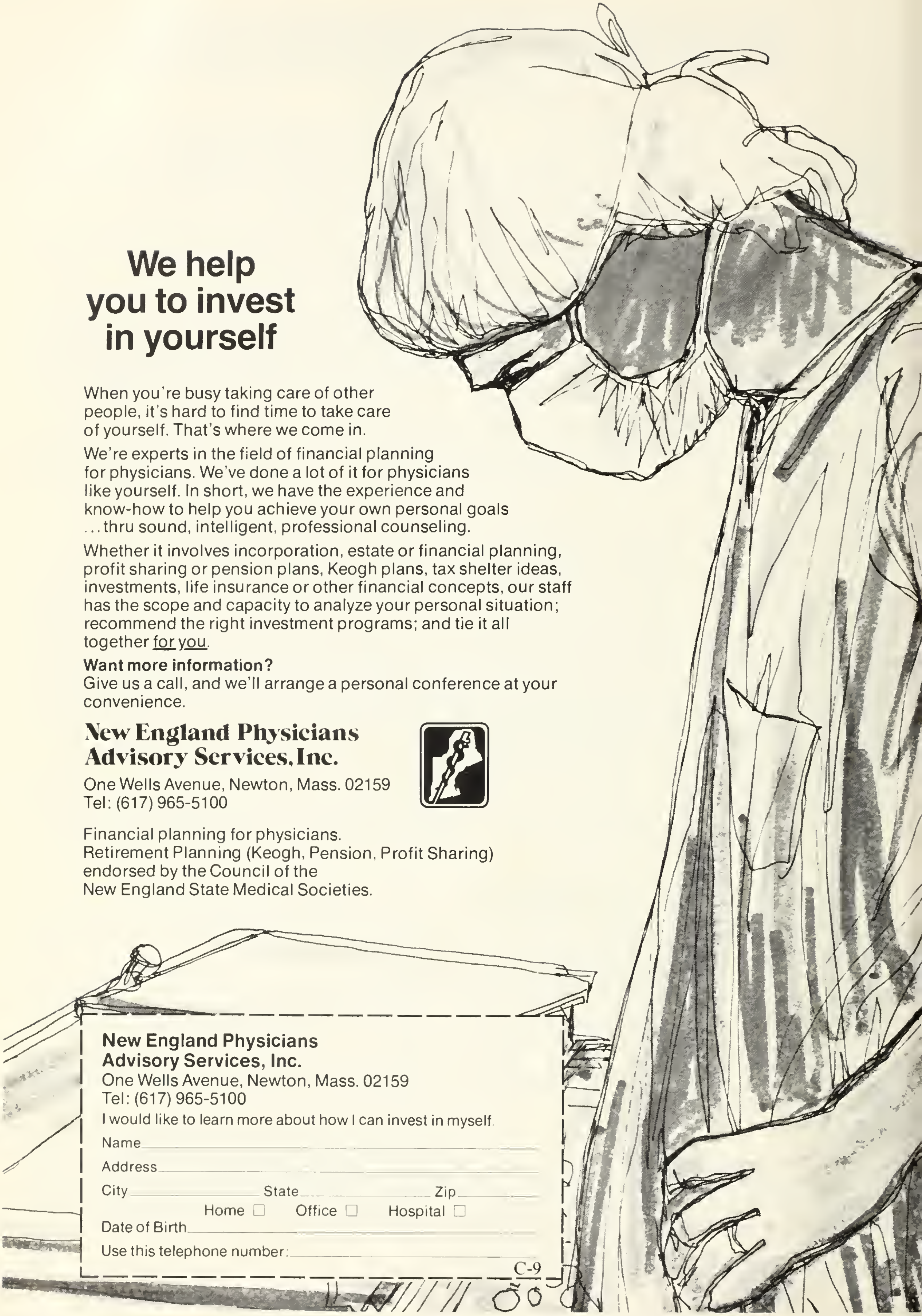
Sencer DJ, Rubin RJ: Risk as the basis for immunization policy in the United States. Symp Series Immunobiol Standard 20:244-251, 1973.

Stiver HG, Graves P, Eickhoff TC, et al: Efficacy of "Hong Kong" vaccine in preventing "England" variant—Influenza A in 1972. N Engl J Med 289:1267-1271, 1973.

*Official name: Influenza Virus Vaccine, Bivalent.

**The World Health Organization has recommended a revised system of nomenclature for type A influenza viruses which includes their strain designation and a description of the 2 surface antigens, hemagglutinin (H) and neuraminidase (N).

H.E.W., Public Health Service, Atlanta, Ga.; June 15, 1974.



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Laboratory Notes

CEA

CEA (carcinoembryonic antigen) is a substance present in the blood in varying amounts, particularly in patients with advanced colon-rectal cancer. At first thought to be quite specific for colon cancer, it is now considered of very limited use in diagnosis.[1] As a screening test it gives false Positives and false negatives in substantial numbers.[2] Its major value is in following patients with known colon-rectal carcinoma, in whom the development or reappearance of positive tests is often an early evidence of recurrence or metastasis.[3] The test is performed by a RIA technique, using an expensive reagent with a short shelf-life.

1. Brodansky D: Cancer *33*, 364, 1974
2. Costanza ME: et al. Cancer *33*, 583, 1974
3. Dhar P: et al. JAMA *221*, 31, 1972

Diagnosis of Pulmonary Embolism

There have been varying degrees of enthusiasm for the diagnosis of pulmonary embolism by testing serum enzymes. A recent article from Finland[1] indicates that serum enzymes are of little value in this context. The enzymes were inconsistently elevated in proven cases of embolism, and the elevations generally reflected secondary hemolysis, liver injury or anoxia of other organs. Enzymes studied were GOT, LDH, and its fractions ornithine transcarbamoylase and alpha hydoxybutyrate dehydrogenase.

1. Konttinen et al, Arch Int. Med. *133*, 243, 1974.

Frozen Sections

The Norwalk Hospital track record for accuracy in 1973 was as follows.

A total of 649 operating room consultations with or without frozen sections were performed. 8 of these were considered wrong, a percentage of 1.2%.

The 8 "wrong" are tabulated below.

Called	*Final*
1. Atypical lipoma of thigh	Myxoid liposarcoma
2. Necrotic carcinoma, breast*	Fat necrosis
3. Papillary adenoma, colon	Polypoid adeno-carcinoma
4. Neurofibroma, spinal cord	Neurofibrosarcoma**
5. Necrotic lymph node	Metastatic adeno-carcinoma with necrosis
6. Thyroid adenoma	Hurthle cell tumor
7. Intraductal carcinoma, breast*	Intraductal papilloma, atypical
8. Benign breast tissue (Not frozen)	Infiltrating duct carcinoma

*Mastectomy not performed in these cases.
**Consultants disagreed as to malignancy of the lesion.

Consideration of the problem cases above indicates the probable cause of the errors as

A. Sampling problems (No. 3, 5). In rapid frozen sections there is no opportunity to make numerous preparations.

B. Intrinsically difficult lesions even after prolonged study (No. 1, 4, 7).

In no case was a normal organ removed because of erroneous diagnosis.

L. Richman, M.D.

GGTP

Gamma-glutamyl transpeptidase (GGTP) is an enzyme increasingly recognized as useful in diagnosing diseases of the liver and pancreas.[1] [2] The following table, modified from Boone et al[1] indicates the percent of elevations of 3 commonly measured enzymes in various diseases.

TABLE

	GGTP	*Alk. P'tase*	*GOT*
Hepatitis	97	80	100
Gallbladder disease	96	89	64
Metastatic ca-liver	94	100	71
Alcoholism	83	65	34
Cirrhosis	84	96	39
Granuloma of liver	89	88	62
Acute pancreatitis	86	83	45
Cancer of pancreas	100	100	35
Diabetes mellitus	53	43	21
Cancer in bone	34	79	38

Overall GGTP is the most sensitive indicator of liver diseases; however elevations may occur in diseases of other organs so it lacks specificity to some degree. Upper limit of normal at Norwalk Hospital has been established at 37 units, with the sex difference being negligible.

In a patient with elevated alkaline phosphatase which may be hepatic or osseous in origin a *negative* GGTP strongly favors bone; a positive GGTP may occur in liver or bone disease, or both may be present.

LAP (leucine aminopeptidase) is being replaced by GGTP which is somewhat more sensitive and is considerably easier to analyze.

1. Boone D J. et al. Am. J. Clin. Path. *61*, 321, 1974.
2. Lum G , Gambino, S.R., Clin. Chem. *18*, 358, 1972.

ROY N. BARNETT, M.D., Editor, *Laboratory Bulletin*, Norwalk Hospital.

Quiz

A 42 year old man is brought to the Emergency Room after an automobile accident in which he suffered severe bruises, a broken pelvis and possible head injury. Chemical screening tests done shortly after admission are normal except for a glucose of 270 mg/dl. Should he receive insulin?**

Sputum Smears

Sputum smears and cultures are commonly examined to determine the presumptive bacterial cause of pulmonary infections. Unfortunately the oropharynx contains many organisms which may be unrelated to the pulmonary flora yet which appear in the sputum. In a recent article[1] the authors recommend transtracheal aspirates to avoid oral contamination, and found that in 90% of cases a Gram stain provided "prompt and accurate bacteriologic diagnosis." They conclude on the basis of comparing expectorated sputum with tracheal aspirates that "Gram stains of expectorated sputum were non-specific," a finding in accord with our own observations.

1. Ries K, Levison ME, and Kaye D: Arch Int. Med. *133*, 453-458, 1974.

Gonorrhea

Conventional teaching has been that gonorrhea is symptomatic in men, often asymptomatic in women. This has recently been disproved[1] in a study which found about 1.5% of carriers in asymptomatic male soldiers and 40% of asymptomatic carriers in male contacts of women with clinical gonorrhea. Of 28 male carriers 18 remained asymptomatic, 5 developed symptoms and 5 underwent spontaneous cure.

Proof of infection was by culture of the anterior urethra using a special swab (Calgiswab). Smears, fluorescent antibody studies and prostatic secretion cultures were less reliable. At present we continue to isolate gonococci from women frequently by cultures on Thayer-Martin or similar media. This study suggests that more cultures from asymptomatic male contacts should be performed.

1. Handsfield et al: NEJ Med. *290*, 117, Jan. 17, 1974.

**Answer

No, insulin should not be given on the basis of the hyperglycemia only. High blood glucose levels are commonly found after severe trauma, apparently due to excessive secretion of glucagon relative to insulin, and do not indicate diabetes.[1]

1. Lindsey A, et al: JAMA *227*, 757-761, Feb. 18, 1974.

Dr. Edmund D. Pellegrino Appointed to Yale-New Haven Medical Center

The Chancellor for the Health Sciences of the University of Tennessee, Dr. Edmund D. Pellegrino, has been appointed to a newly created position of chairman of the board of the Yale-New Haven Medical Center, Inc., and will assume his new post fulltime in New Haven next January.

The announcement was made by G. Harold Welch, Jr., President of Yale-New Haven Hospital, and Kingman Brewster, Jr., President of Yale University, who expressed their great satisfaction "in finding a man of Dr. Pellegrino's impressive ability and experience to direct such a vital enterprise."

The Yale Corporation and the Hospital board have given Yale-New Haven Medical Center, Inc., responsibility for overall program and facility planning for the medical center and for the raising of funds for new programs and facilities.

In a joint statement, Charles B. Womer, Director of the Hospital; Dr. Robert W. Berliner, Dean of the Yale School of Medicine; and Donna K. Diers, Dean of the Yale School of Nursing, said that "for many years there has been a recognized necessity for the Hospital and Yale to address planning and other matters of mutual concern in a more effective manner. It is our belief that the establishment of this new structure will enhance the ability of the two institutions to develop new programs of research, to respond to rapidly advancing changes in medicine and nursing and to provide for the needs and expectations of the people we serve."

Dr. Pellegrino is presently Chancellor for the Health Sciences and Vice President for Health Affairs of the University of Tennessee system. He is also Professor of Medicine at the university.

Prior to going to Tennessee, Dr. Pellegrino was vice president for health sciences, director of the health sciences center, and professor of medicine at the State University of New York at Stony Brook. Among other positions, he has been professor and chairman of the department of medicine at the University of Kentucky.

Dr. Pellegrino was graduated from Saint John's University, Brooklyn, New York and received his degree in medicine from New York University. He was associated in various medical capacities at New York University and Bellevue Hospital. Dr. Pellegrino has been and continues to be a scientific investigator in calcium and bone metabolism. He is chairman of the board of the Institute for Humanities in Medicine, supported by the National Endowment for the Humanities.

During his career, Dr. Pellegrino has served on numerous committees of the American Hospital Association, the Association of American Medical Colleges, the American Medical Association, and health planning agencies in New York State and Washington, D.C.

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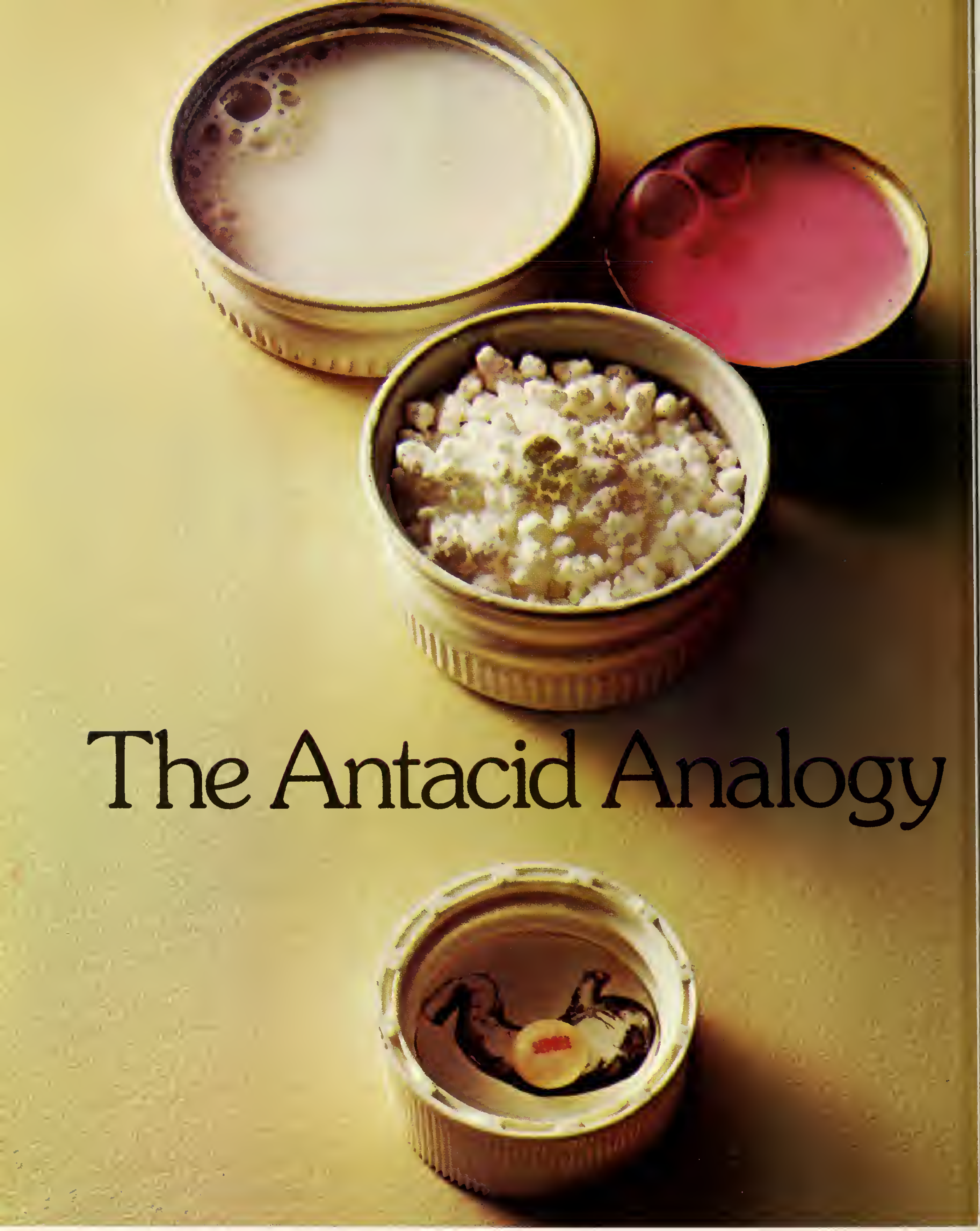

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Precautions: Since varying degrees of urinary hesitancy may be evidenc by elderly males with prostatic hypertrophy, such patients should advised to micturate at the time of taking the medication.

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Adverse Reactions: Varying degrees of drying of salivary secretions ma

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Scientific Activities

Summary of Actions

Council Meeting

Wednesday, July 17, 1974

I. Attendance

Present in addition to the Chairman, Dr. D. A. Grendon, were: Drs. Root, Jr., Van Syckle, Spitz, Backhus, Brandon, Nolan, Gardner, Fabro, Bradley, Hess, Cramer, Granoff, Hecklau, Rubinow, Ragland, Jr., James, Freedman, Roch, Kamens, Harkins, Magram, Mendillo, Eslami and Klare.

Also present were: Mrs. Lindquist, Mrs. Roch (President, Woman's Auxiliary), Mr. Tomat, Mr. Sullivan (AMA), Commissioner Lloyd (State Health Dept.) and Dr. Richards.

Absent were: Drs. Johnson, Krinsky, Dambeck, McGarry, Canzonetti, Sadowski, Barrett and Hastings.

II. Routine Business

Approval of Minutes

As published and distributed, it was VOTED to approve the minutes of the meeting of June 6, 1974.

Life Memberships

It was VOTED to approve applications for Life Membership submitted by the following eligible Active Members:

John T. Larkin, Sand Hill Road, Hampton (W)
Daniel O. C. Sayers, 135 W. Main Street, Waterbury (NH)
Samuel Spinner, 114 Sherman Avenue, New Haven (NH)

Election of Student Members

It was VOTED to elect to Student Membership 2 students enrolled in U.S. medical schools and 3 resident physicians serving in Connecticut hospitals. The names of those elected will be published in an early issue of the Journal.

Date of Next Meeting

The Chairman set the date for the next meeting of the Council for Thursday, August 15, 1974.

III. Old, New and Special Business

Resignations, Appointments, Etc.

(a) *Committee on Program of Scientific Assembly:* It was VOTED to accept the resignation of Andrew J. Canzonetti, Waterbury, as a member of the Committee, and it was further VOTED to appoint D. Norman Markley, Hartford, to replace Dr. Canzonetti as a member for the balance of the term 1973-78.

(b) *Committee on VD Education and Control:* It was VOTED to appoint four new members to the Committee as follows: A. Russell Brenneman, North Haven; Robert P. Bowen, Coventry; Edward A. Coyne, Hartford; Joseph F. Scholand, New Britain.

(c) *CSMS Nominees—New State Alcohol Advisory Council:* In accordance with the provisions of Public Act 74-280—"Adoption of an Alcohol and Intoxication Treatment Act," it was VOTED to nominate to the Governor for appointment as representatives of the Society on the State Alcohol Advisory Council two CSMS members as follows: Robert E. Brubaker, New Haven; John R. Gaintner, Hartford. It was noted that Drs. Brubaker and Gaintner are also eligible for appointment to these posts on the basis that they were members of the now-abolished Advisory Council on Alcoholism and Alcohol Abuse which was predecessor to the new Alcohol Advisory Council. The statute provides that all members of the predecessor Council shall be appointed to the new Council by the Governor.

(d) *Representative, Advisory Board of CHA Alcohol Treatment Training Program:* In response to a request of the Connecticut Hospital Education and Research Foundation, it was VOTED to appoint H. Robert Greenhouse, Hamden, to serve as a representative of the Society on subject Advisory Board. The CHERF has received a grant from the Connecticut Alcohol Advisory Council "for the purpose of conducting training programs in Connecticut's acute care general hospitals in preparing to treat al-

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coholics under the provisions of Public Act 74-280." (See (c) above)

(e) *Representative to YUSM Education Project:* It was VOTED to designate Kenneth F. Brandon, Hartford, to serve as a representative of the CSMS to participate in a "task force" which is being formed at the Yale School of Medicine to undertake a study and possible development of educational programs for persons entering the field of health planning and administration.

HCMA Request for Ruling re Jurisdiction

It was VOTED to accept for filing a letter received from the President of the Hartford Association which requested that a ruling be made as to which County Association has jurisdiction in situations in which a complaint is received against a physician who practices primarily in one Association's geographical area but who holds membership in a different Association. After lengthy discussion, it was VOTED to adopt a motion as follows: That the Council inform the HCMA President that, in its opinion, the County Medical Association of which the physician is a member has jurisdiction in such situations, but that the Council also recognizes the moral obligation of any County Association to correct abuses in medical practice occurring within its geographical area of jurisdiction. It was further VOTED to inform the HCMA President that the Council will appreciate being advised of the response of the other County Association involved in the particular situation cited in order that the Council may continue to be of assistance if indicated.

It was further VOTED to refer to the Judicial Committee, for study and report, the general question re County Association jurisdiction in situations similar to the one described by HCMA.

Acupuncture

It was VOTED to accept for filing two documents relating to this subject. The first was a communication from the Commissioner of Health, dated June 18, 1974, which transmitted to the Council the policy of the State Health Department re the performance of acupuncture as of that date. In brief, the policy characterizes acupuncture as an experimental procedure which should be scientifically investigated under controlled conditions; states that acupuncture is presently assumed to constitute the practice of medicine in that needles are introduced into the human body; and concludes that acupuncture should be performed only by physicians licensed in Connecticut to practice medicine and surgery or under their supervision.

The second communication was also received from the State Commissioner of Health, and informed the Council that "legislative pressure" is being applied to him to authorize non-physicians (technicians) to practice acupuncture under a licensed physician's supervision, principally on the grounds that the "physicians' trained assistants" amendment to the Medical Practice Act (1972) would appear to validate the granting of such authorization. Being of the opinion that specific legislation may be required to deal effectively with acupuncture "problems," Dr. Lloyd invited the assistance of the Society in drawing up a suitable comprehensive bill to present to the 1975 session of the General Assembly.

It being generally agreed that, to assist Dr. Lloyd, it would be necessary for the Council and/or House of Delegates to adopt an official position with respect to the performance of acupuncture, and noting that further reports from the Ad Hoc Committee on Acupuncture were anticipated, the Council VOTED to table action on a motion which was intended to define an official subject position. It was further VOTED to request the Ad Hoc Committee on Acupuncture to file a report by the next Council meeting, which will be held on August 15.

Report—Committee on Statewide Medical Planning

It was VOTED to accept for filing a report submitted by the Committee which covered the subjects of "Deficiencies in the Delivery of Health Care in Connecticut" and "Health Education." Each of eleven separate sections of the report dealt with a single or several related aspects of the two subjects, and each was followed by one or more recommendations regarding remedial and/or helpful actions that could be taken by the Society—primarily by referral to appropriate committees for further study and implementation. The twelfth section of the report offered a suggestion that the Council give consideration to establishing a new department within the Society which would coordinate all activities and assure full and prompt implementation of the report's recommendations.

The Council VOTED to approve, with minor amendment, all but one (III) of the first eleven sections of the report and the accompanying recommendations. A substitute section and recommendation for III was approved, changing the emphasis from the original listing of "police protection and law enforcement" in ghetto areas as a major deterrent to adequate physician coverage to emphasis on the substandard provisions (including financing) made by the state government for attracting physicians to practice in such areas. The Council further

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VOTED to accept the report, as amended, and to commend the Committee on Statewide Medical Planning for the excellence of the report.

Finally, it was VOTED to refer back to the Committee, for further study and definition, the concluding suggestion re the establishment of a new department within the Society for the purposes described above. Meanwhile, the report will be revised to accommodate all amendments and implementation will be initiated by Staff.

Report—Delegate to Medical Society of New Jersey

It was VOTED to accept for filing a report on the proceedings of the 5/11-14/74 annual meeting of MSNJ, submitted by Morris A. Granoff, New Haven. Dr. Granoff attended as delegate from CSMS. Stemming from a discussion of the report, the Council took actions as follows:

(a) VOTED to recommend to the next House of Delegates meeting approval of mandatory "unified membership" (county, state and AMA).

(b) VOTED to request Staff to inquire as to the degree of identification of the Society given to students at the Yale and UConn medical schools who receive loans from the CSMS Medical Student Financial Aid Fund, and to report findings to the Council.

Connecticut Medical Institute—PSRO

It was VOTED to accept for filing (a) a report submitted by James D. Kenney, New Haven, president of CMI, on the progress that has been made in the past month or two in preparing to get the Institute into operation—especially with respect to its contractual (with HEW) role as a "support center" for the four Connecticut area PSROs; (b) a reproduction of the resolution on PSRO adopted by the AMA House of Delegates at Chicago in June. The text of the resolution follows:

"RESOLVED: That this House of Delegates instruct the Board of Trustees of the Association to direct its efforts to achieve constructive amendments to the PSRO law and to ensure appropriate regulations and directives, with particular effort directed at amending those sections of the law which present potential dangers in the areas of confidentiality, malpractice, development of norms, quality of care, and the authority of the Secretary of HEW; and be it further

RESOLVED: That the Association should continue its efforts to achieve legislation which allows the profession to perform peer review in accordance with the profession's philosophy and the best interests of the patient; and be it further

RESOLVED: That individual state associations which elect non-participation shall not be precluded from such a position by this Association's policy statement, but should be urged to develop effective non-PSRO review programs which embody the principles endorsed by the profession as constructive alternatives to PSRO; and be it further

RESOLVED: That if ongoing evaluation of the PSRO program reveals that it does, in fact, adversely affect the quality of patient care, or conflict with Association policy, the Board of Trustees be instructed to use all legal and legislative means to rectify these shortcomings."

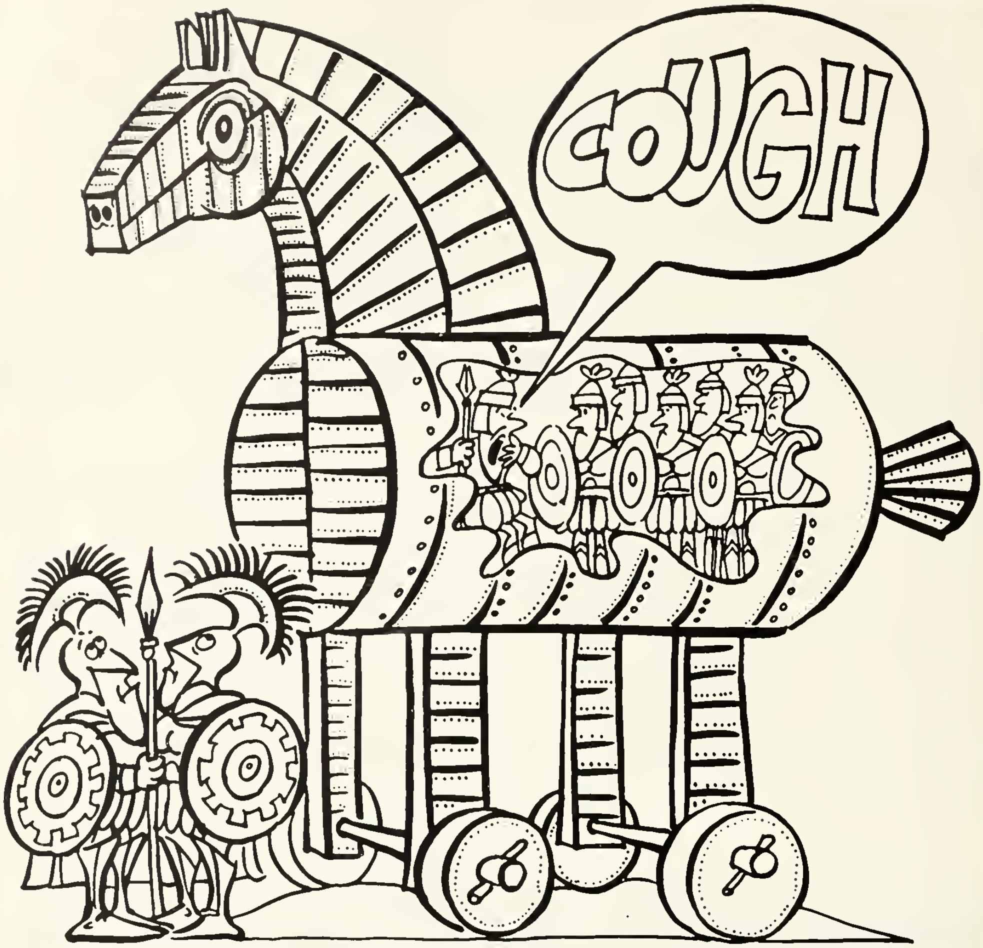
Further Information—$150 License Registration Fee

It was VOTED to accept for filing: (a) A written opinion of CSMS legal counsel that for physicians to write "Paid under protest" on their checks in payment of the registration fee would not cause such payment to be placed in escrow or otherwise set aside by the State, but that to do so might serve a purpose of "laying a foundation for future recovery . . . if a physician or a group of physicians intended or were prepared to contest the (amount of) the fee by appropriate litigation . . .".; (b) A letter advising the Council that, based on an action of the NHCMA Board of Governors, the New Haven Association was urging its members to write "Paid under protest" on their checks in payment of the registration fee when next due (1975) as a device for laying the foundation for possible later legal action, and recommending that the Council advocate that similar action be taken by the other component County Associations.

It was further VOTED to approve the NHCMA Board's recommendation that the Council convey the subject advocacy to the other component Associations and also to urge CSMS members directly to write the prescribed legend on their checks in payment of the subject license registration fee.

CSMS-CPA Co-Sponsorship of Symposium

It was VOTED to accept for filing a communication received from the Joint Conference Committee of CSMS and the Connecticut Pharmaceutical Association that requested the Council to commit the Society to co-sponsoring an October symposium on "practical problems in contemporary antibiotic therapy" which is being planned by members of the Joint Committee representing the two organizations. Beyond possible administrative promotion of the symposium among CSMS members, there will be no financing required of the Society. Follow-



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ing discussion, it was further VOTED to grant the co-sponsorship requested.

Proposed New Format for CSMS Annual Meeting

It was VOTED to accept for filing a report submitted jointly by the Council's Subcommittee on Annual Meeting Arrangements and the Committee on Program of the Scientific Assembly which proposed that a number of changes be made in the format of the Annual Meeting of the Society. The changes involved both the meeting of the House of Delegates and the Scientific Assembly.

It was further VOTED to approve the report and recommendations as submitted. In brief, the new format calls for a two-day (instead of a three-day) meeting: i.e., House of Delegates—1 day; Scientific Assembly—1 day. The Annual Dinner of the Society will be transferred from a program day to the House of Delegates day; attendance at the dinner will be entirely by subscription (except for invited guests); the incoming president will be inaugurated at the dinner; and each component County Association will be urged to have "official" representation at the dinner and to purchase "blocs" of tickets (large Associations—2 tables of eight; small Associations—1 table of eight).

The one-day Scientific Assembly will feature: Section meetings from 8:30-10:00 a.m.; general program from 10:30-1:00; luncheon; general program from 2:00-4:00 p.m.; and the balance of Section meetings from 4:30-6:00.

N.B.: The foregoing is a summary of the proceedings and actions of the Council on July 17, 1974. Detailed minutes of the meeting are on file at 160 St. Ronan Street, New Haven, for perusal by any interested member of the society.

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STUDENT MEMBERS

Five student members were elected to the Society:

John A. Drews, M.D., 112 Davenport Ave., New Haven, Conn.
Yale University—Class of 1967
Resident Yale-New Haven Hospital '76
Parent: Thomas H. Drews

Antonio J. Grisanty, M.D., 55 Wildman St., Danbury, Conn.
University of Madrid—Spain—Class of 1968
Resident Danbury Hospital, '75
Parent: Juan V. Grisanty

Ronald T. Holmes, M.D., 80 High St., East Haven, Conn.
Tufts Univ. Sch. of Med.—Class of 1973
Resident Yale-New Haven Hospital '75
Parent: Richard B. Holmes

Kay Francis Johnson, 1603 Farwell, Saginaw, Mich.
Yale University—Class of 1977
Pre-Med: Aquinas College
Parent: Deceased

John Jien Kao, 144 Rockaway Ave., Garden City, N.Y.
Yale University—Class of 1976
Pre-Med: Yale College
Parent: Dr. Frederick F. Kao

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PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a service to the medical profession in the State of Connecticut. Opportunities for physicians to locate in Connecticut will be published as space permits and will be distributed to physicians making inquiry of such opportunities. Information should be sent to 160 St. Ronan Street, New Haven, Connecticut 06511, (203-865-6822).

Physicians wishing to establish practice in Connecticut are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two consecutive issues of *Connecticut Medicine.*

OPPORTUNITIES FOR PRACTICE

(If no name is listed, contact the Physician Placement Service for more details.)

Allergist: Young M.D. to assume practice. Home-office location available. Conn. shore location.

Anesthesiologist: Excellent opportunity in expanding hospital. Multi-specialty medical staff. Contact: Chief of Anesthesiology, Rockville General Hospital, Rockville, Conn. 06066.

Emergency Room: Four hospitals each have full time positions available.

Emergency Medical Services: Director of State Office of EMS. $28,000 salary. Contact: Douglas S. Lloyd, M.D., 79 Elm Street, Hartford, Connecticut.

Family Practice: Society maintains a list of nineteen opportunities for family physicians.

Occupational Medicine: Medical Director for insurance firm with headquarters in New York City. Internist desired. Contact: Paul E. Chagnon, 111 Pearl Street, Hartford, Conn. 527-9107.

Occupational Medicine: Chief of Health Services for State Employees. Pre-employment and periodic physicals. Experience in occupational health. Mr. John Crowley, State Health Dept., 79 Elm Street, Hartford. 566-3799.

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Internal Medicine: Twenty-one opportunities for internists are on file with the Physician Placement Service.

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OB/Gyn: Solo practitioner needs associate. Waterbury area.

OB/Gyn. Multi-specialty group in northwestern Connecticut. Numerous benefits. Internist needed also.

Ophthalmologist: New Milford area can support additional ophthalmologist. Office space and assistance available. Morris L. Clark, M.D., 21 Elm Street, New Milford, Conn.

Ophthalmologist: Office space in new medical building. Area needs an ophthalmologist. Northwest corner of Connecticut. Frank Lovallo, M.D., Sharon, Connecticut 364-5161.

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PHYSICIANS WISHING TO LOCATE IN CONNECTICUT

(If no name is listed, contact the Physician Placement Service)

Allergist: Board certified. Connecticut license. Desires New Haven or surrounding areas.

Dermatologist: Available September 1974. Completing military obligation. Board certified. Solo or group. Univ. of Michigan Medical School. Residency: Univ. of Virginia Medical Center. Robert D. Greenberg, M.D., U.S. Army Hospital, Augsburg, APO N.Y. 09178.

Dermatologist: Available immediately. Solo, group, associate arrangement in medium sized community. 29 yrs. old. Board eligible. Especially interested in southwestern Conn. Medical College of Va.; U.S. Naval Hospital in Philadelphia.

Family Practice: Desires small town. 29 yrs. old. Presently in practice. Wishes to return to northeast in primary care type practice. Case Western Reserve. Wife seeking employment as social worker. Henry Brodkin, M.D., 61 6th Avenue, San Francisco, Cal. 94118.

Internal Medicine: Board eligible 1974. Board eligible in cardiology 1975. Medium or small community. Group or associate practice. Princeton and Cornell. 32 yrs. old. George E. Berk, M.D., Ridder Apts., 4-5, Valley Road, Manhasset, New York 11030. (516-627-4046)

Internal Medicine: Cardiology: Board eligible. Group practice. Fordham and Jefferson Medical College. 30 yrs. old. Married. Thomas J. Cuomo, Jr., M.D., 5405 Markview Lane, Richmond, Virginia 23234.

Internal Medicine: Board eligible, Conn. licensing pending. FLEX. Residency done at Hartford Hospital. Joseph J. Farraye, M.D., 121 Vera Street, West Hartford, Ct. 06119.

Internal Medicine: Available immediately. Board certified. Medium sized community. Group or associate practice. Board qualified for pulmonary medicine. 32 yrs. old. Univ. of Vt. and Downstate Medical. Robert H. Israel, M.D., 454C Jadwin Loop, Ft. Belvoir, Virginia 22660.

Internal Medicine: Board eligible. Available immediately. 31 yrs. old. New York license. Interned at Bridgeport Hospital. Parvaiz Naseem, M.D., 53-12 97th Street, Corona, New York 11368.

Internal Medicine/Nephrology: Board eligible. 32 yrs. old. Completing Columbia P and S Fellowship. Medium sized community. Group or associate practice. Available in September. Prefers Southern Connecticut. Austin M. Pattner, M.D., 5960 Culzean Drive, Dayton, Ohio 45426. USAF

Internal Medicine: Available immediately. Conn. license. Board certified. Wishes to join group of board eligible or certified internists. Kenneth E. Sack, M.D., 2152 Glencoe Hills Dr., Ann Arbor, Michigan 48104.

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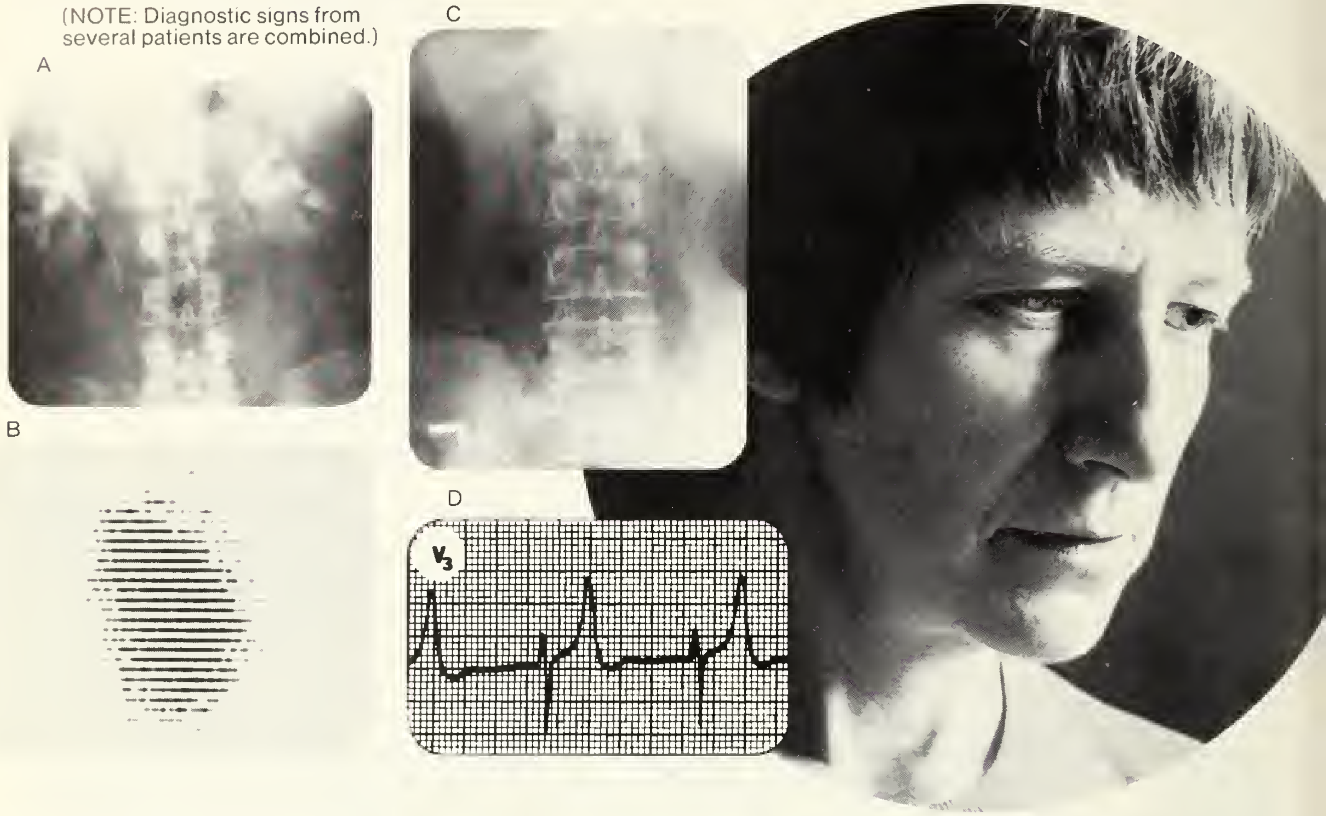

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See next page for summary of Product Information.

Pulmonary Medicine: Available now. Board certified. Dartmouth and Harvard Medical. Presently at Mayo Clinic. William C. Sheehan, M.D., 1403 Durand Court, Rochester, Minnesota 55901.

Internal Medicine: Medium or small sized community. Board eligible. Solo or associate practice. Allen J. Zobay, M.D., 3338 Cherryhill Drive, Fairfield, Ohio 45014.

OB/GYN: Available immediately. FLEX. Board eligible. Experienced in laparoscopy. Anant R. Bhati, M.D., 506 Dixmyth Avenue, Cincinnati, Ohio 45220.

OB/GYN: GYN practice with limited OB. 38 years old. Pa. license. T. K. Ghosh, M.D. RD No. 4, Danville, Pennsylvania 17821.

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OB/GYN: Available now. Board eligible. FLEX. Amherst and Bologna (Italy). Completing military service. Michael Solomon, M.D., Blake Road, Limestone, Maine 04750.

Ophthalmology: Glaucoma and pediatric ophthalmology. Board eligible. Solo, group or associate practice. Large or medium sized community. 31 yrs. old. Stuart A. Terry, M.D. 518 Cloudcroft Drive, San Antonio, Texas 78228.

Orthopedic Surgery: Available now. Diplomate of National Board. Board eligible. New York and New Jersey licenses. 34 yrs. old. Medium sized community. Anthony J. Kaiser, M.D., 38 Clarendon Place, Bloomfield, New Jersey.

Otorhinolaryngologist: Connecticut license. (FLEX). Board certified. 38 yrs. old. Trained in Warsaw, Poland. Residency: Albert Einstein Medical Center. Group or associate practice. Stefan A. Kucinski, M.D., 61-20 Grand Central Parkway, Forest Hills, New York 11375. (212-271-8880).

Pathologist: AP and CP. Board eligible. Ohio license. Presently at UConn Health Center. 33 yrs. old. Anand Arora, M.D., 45-C, Grandview Drive, Farmington, Ct. 06032.

Pathologist: Board certified. Desires institutional setting in large city. Presently chief of lab service. 53 yrs. old. Walter C. Beck, M.D., 2147 Boston Court, Indianapolis, Indiana 46208.

General Surgery: Board certified. Medium sized community in group or associate type practice. Available November 1974. Franklin L. Rutberg, M.D., Kenilworth, Apts. No. 503. Philadelphia, Pennsylvania 19144.

Thoracic Surgery: Available January 1975. Board eligible. NYU and Cornell. Presently at Boston City—B.U. Hospital. Jack C. Lee, M.D., 860 Harrison Avenue, Apt. 805, Boston, Mass. 02118.

Pediatrics: Connecticut license. Residency at University Hospital of Cleveland and Yale-New Haven. Interested in dermatology. Will complete active duty in September. Board eligible. Group or associate practice desired. Stephen King, M.D., 3417 High Street, Dover, Delaware 19901.

Pediatrics: Board eligible. Desires group practice in large community. Special training in infectious diseases and microbiology. McGill trained. 33 years old. Ronald M. Shapera, M.D., 509 de Gaspe, Nuns Island, Montreal, Canada 201.

Psychiatrist: Board eligible. Available now. Part-time or full-time salaried position. General, no child psychiatry. Medium or small community. B.U., University of Vermont and UCLA trained. James S. Brust, M.D., 4409 Via Pinzon, Palos Verdes Estates, California 90274.

General Surgery: Board eligible. Connecticut license. Available now. Group or associate practice in large or medium sized city. 32 years old. Leslie Elliott Strong, M.D., 66-32 Burns Street, Rego Park, Queens, New York 11374.

General Surgery: Board eligible. New York license. Associate type practice in medium sized community. Sub-specialty training in vascular and orthopedic surgery, traumatology. Hyman Miller, M.D., 240 Garth Road, Scarsdale, New York 10461.

General Surgery: Board Eligible. FLEX. Group practice in large community. Available now. Ghulam Moheyuddin, M.D., c/o Blair, R.D. 1, Worcester, New York 12197.

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OBITUARY

MARK SOLOMKIN, M.D.
1912-1974

Dr. Mark Solomkin, president of the medical staff and chairman of the department of obstetrics and gynecology at Mt. Sinai Hospital, died at his home on May 20th.

A native of Hartford, he was graduated from the University of Connecticut and St. Louis University School of Medicine. He served his internship at St. Francis Hospital and his residency in obstetrics at the Chicago Maternity Center and the Evangeline Booth Hospital, Boston. He also served residency at the Passavant Memorial Hospital.

Dr. Solomkin was an adviser to the department of obstetrics and gynecology at Rockville General Hospital, and a consultant on health services at the University of Hartford and at the Institute of Living. He was also a consultant in obstetrics and gynecology for the University of Connecticut Hospital, McCook Division, and in 1972 was director of the Center for Health Evaluation.

He was a teaching fellow in obstetrics and gynecology at Tufts Medical School. He was a veteran of World War II and saw service as an Army captain with the 36th Station Hospital in the European Theater.

His memberships included the American College of Obstetrics and Gynecology, the American Fertility Society, the American Medical Association, the Connecticut State Medical Society, Hartford County Medical Association, the Hartford Medical Society, and the Connecticut Society of the American Board of Obstetricians and Gynecologists.

Dr. Solomkin was also a member of the International Federation of Obstetrics and Gynecology and the International Fertility Society.

Mark Solomkin will be remembered long for his many and varied accomplishments. Whatever he set out to do he did thoroughly. Early in his life he set out to be a physician. The romance with his vocation never ceased. He found pleasure in his work, his family and his friends. A year before he became ill he told a group of us that he considered himself a fortunate man for he had attained all his dreams. Those of us who were there to share his successes mourn our loss but gain solace in having known this remarkable man.

He is survived by his wife Ruth Sherman Solomkin; a son, Dr. Joseph Solomkin of Minneapolis, Minnesota; a daughter, Mrs. Harvey Hoberman of West Hartford; two brothers, Bert Solomkin of Rocky Hill and Stanley Solomkin of Wantaugh, Long Island, N.Y.; three sisters, Mrs. Dan Melrose and Mrs. Charles Sobel, both of West Hartford, Mrs. Jack Bourke of Bloomfield, and two grandchildren.

MERVIN ROSENBERG, M.D.

In Memoriam

Kezel, Albert, P.C., Georgetown Medical School, 1935. Dr. Kezel was a general practitioner in the Fairfield area since 1936. He was a member of the Fairfield County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Kezel died June 24, 1975, at the age of 65.

O'Neill, Charles W., Yale School of Medicine, 1926. Dr. O'Neill was a former dermatologist in the Hartford area since 1926. He served in the Army during World War I and was attached to the Students Army Training Corps at Yale University. He was a member of the Hartford County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. O'Neill died June 19, 1974 at the age of 75.

NEW DEVELOPMENTS IN PHARMACOLOGY OF VITAMIN D

Although nutritional rickets is now rare in the United States and Canada, recent research concerning vitamin D has suggested new methods for the treatment of other forms of rickets. Two metabolites of vitamin D that may have therapeutic applications have recently been synthesized (J. L. Omdahl and H. F. DeLuca, Physiol. Rev., 53:327, 1973).

Various Types of Vitamin D

Ergocalciferol (vitamin D2), available from plant sources, is the active ingredient in most proprietary vitamin D preparations. Cholecalciferol (vitamin D3) is the "natural" human vitamin; in addition to being available in the diet from animal sources, it is synthesized by the skin from 7-dehydrocholesterol in the presence of ultraviolet light. Vitamin D3 becomes much more active after hydroxylation by liver enzymes to 25-hydroxycholecalciferol; this is further transformed by a kidney enzyme into 1,25-dihydroxycholecaliciferol, which is still more active.

Classical nutritional deficiency rickets of infants, which can be treated with any form of vitamin D, is now rare in the United States and Canada because almost all milk has been fortified with vitamin D. The most common causes of severe rickets in North America at present are inherited metabolic disorders.

Autosomal Recessive Vitamin D-Dependent Rickets

(pseudo-vitamin D-deficient rickets; Prader's syndrome)

This condition is apparently caused by deficiency of the enzyme that converts 25-hydroxycholecalciferol to 1, 25-dihydroxycholecalciferol. One microgram per day of 1, 25-dihydroxycholecalciferol administered intravenously has produced healing of rachitic lesions in a 28-month old child (D. Fraser et al., N. Engl. J. Med., 289:817, October 18, 1973), but this derivative is not available for routine clinical use. Patients have also been treated affectively with 24 to 120 mcg per day of 25-hydroxycholecalciferol, which is available as an experimental drug from Upjohn (J. F. Rosen and L. Finberg, Pediatr., Res., 6:552, 1972); other workers have reported that higher doses (200 to 900 mcg per day) may be needed (D. Fraser et al., cited above). Vitamin D-dependent rickets can also be treated with vitamin D2 or D3, in doses of 3,000 to 7,500 units daily, although some patients have required daily doses of 25,000 to 45,000 units (C. Arnaud et al., Pediatrics, 46:871, 1970).

X-Linked or Autosomal Dominant Vitamin D-Resistant Rickets

(familial hypophosphatemia)

This disease, unlike the autosomal recessive form, does not respond to 1 mcg/day of 1, 25-dihydroxycholecalciferol (F. H. Glorieux et al., Lancet, 2:287, August 11, 1973; A. S. Brickman et al., N. Engl. J. Med., 289:495, September 6, 1973). Vitamin D-resistant rickets is not completely resistant to treatment with vitamin D, but requires such high pharmacologic doses (50,000 to 20,000 units per day) that severe adverse effects may occur. Some clinicians prefer to use a synthetic analog, dihydrotachysterol, because it has a shorter duration of action, making it easier to reduce tissue levels of vitamin D should toxicity occur. Initial dosage (until healing) may be from 0.5 to 2.0 mg daily, with maintenance dosage usually in the range of 0.3 to 1.5 mg per day. Combined therapy with oral phosphate salts and reduced doses of vitamin D appears to be effective and is probably safer than high doses of vitamin D alone (F. H. Glorieux et al., N. Engl. J. Med., 287:481, 1972).

Rickets from Anticonvulsants

There have been a few reports suggesting that anticonvulsant drugs of the barbiturate and hydantoin types may stimulate microsomal enzymes in the liver to inactivate vitamin D (C. E. Dent et al., Br. Med. J., 4:69, 1970; J. Hunter et al., Br. Med. J., 4:202, 1971). Rickets resulting from this drug interaction may be managed either by reducing the dosage of anticonvulsant or by giving vitamin D supplements.

Other Forms of Rickets

Rickets associated with renal disease, hepatic disease, amino acid disorders, and renal toxins may also benefit from treatment with vitamin D or its metabolites. There are some bone diseases related to rickets that are not benefited by any form of vitamin D, and its use only presents an unnecessary hazard. Included in this group are congenital hypophosphatasia and metaphyseal dysostosis.

Adverse Effects of Vitamin D

Massive overdoses of vitamin D can produce tetany, acute pancreatitis, convulsions, and pitressin-resistant diabetes insipidus. Metastatic calcification may occur at different sites, including kidney, blood vessels, myocardium, lungs, and skin. In amounts of 100,000 units per day vitamin D can result in hypercalcemia, osteoporosis, irreversible renal failure, and hypertension in normal adults.

Reprinted from The Medical Letter on Drugs and Therapeutics Vol. 16, No. 3, Feb. 1, 1974.

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Connecticut Medicine

The Journal of the Connecticut State Medical Society

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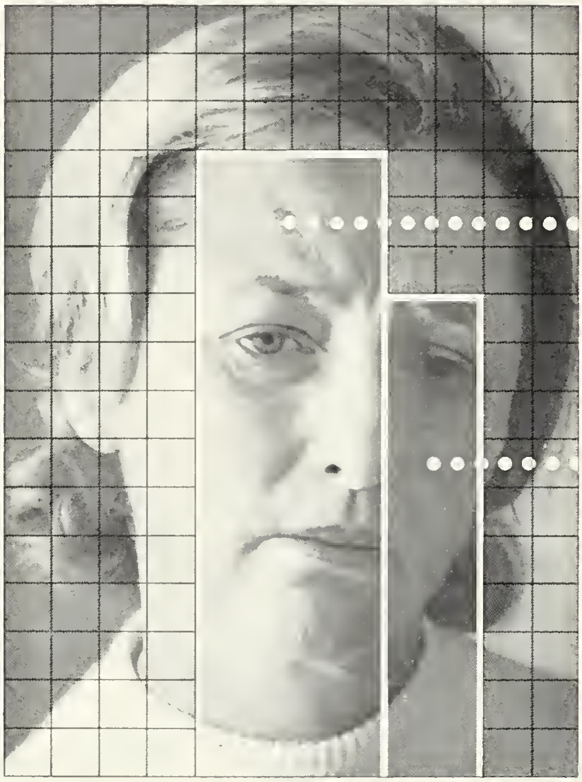
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Advances in the Management of Childhood Leukemia

Howard A. Pearson, M.D.

Childhood leukemia has emerged as one of the important causes of mortality today. With the control of the traditional scourges of children by antibiotics and immunization, diseases that a generation or two ago were unusual have become more prominent and important, and chief among these are the childhood leukemias.

As one considers the childhood leukemias, there are strong age-related differences. In the newborn period, acute myelogenous leukemia predominates. In mid-childhood, between the ages of two and six, acute lymphoblastic leukemia accounts for 80% or more of cases of leukemia. In the young adult, myelogenous leukemia re-emerges as the most important form of the disease. On Table I are listed the types of leukemia encountered in children and their relative prevalence. I am going to discuss only acute lymphoblastic leukemia which accounts for 80% or more of these cases. I am not going to discuss myelogenous leukemia or the more unusual types that are encountered from time to time.

TABLE I

TYPES OF LEUKEMIA IN CHILDHOOD

Acute lymphoblastic leukemia—80%
Acute myelogenous and myelomonocytic leukemia—15%
Chronic and subacute myelogenous leukemia—5%
Very rare: Erythroleukemia
Eosinophilic leukemia
Plasmocytic leukemias

The typical bone marrow picture of acute lymphoblastic leukemia of childhood shows a uniform and monotonous replacement of the marrow architecture by primitive lymphoblastic cells. The signs and symptoms of leukemia can be explained by proliferation of these cells in the bone marrow and other reticuloendothelial tissues. On Table II are listed the signs and symptoms of leukemia and their relative prevalence.

TABLE II

SIGNS AND SYMPTOMS OF LEUKEMIA

Anemia—90%
Lymphadenopathy & splenomegaly—75%
Thrombocytopenic bleeding—50%
Fever—50%
Bone pain—25%

The past decade has seen marked improvement in prognosis of acute lymphoblastic leukemia of childhood. These advances have been realized primarily because of chemotherapy. As one considers the chemotherapeutic agents which are useful in the treatment of childhood leukemia, it is useful and generally accurate to divide them into two classes. (Table III). The first class could be termed the "inducing" agents. The drugs of this class have certain properties in common: they work rapidly, usually within hours or days; they have a high response rate, but their duration effect is quite short, measured in terms of a few weeks or months at best. The agents which can be characterized as inducing agents include the corticosteroids, vincristine and l-asparaginase.

TABLE III

AGENTS USEFUL IN THE TREATMENT OF ACUTE LYMPHOBLASTIC LEUKEMIAS OF CHILDHOOD

A. Remission "inducers"
    Rapid action—days
    High response rate—60-80%
    Short duration—weeks to months
  Prednisone
  Vincristine
  l-asparaginase

B. Remission "maintainers"
    Slower action—weeks to months
    Lower response rate—40-50%
    Long duration—months to years
  6-Mercaptopurine
  Methotrexate
  Cytoxan

It is very important to be able to induce remission rapidly because mortality is high during leukemic relapse, due to hemorrhage or infection. The inducing agents are able in a high proportion of cases to induce complete remissions during which there is a restoration of hematologic values and bone marrows to normal. In fact, during remission it is impossible to make a diagnosis of leukemia with certainty.

The second class of drugs can be classified as "remission maintainers." These also have certain properties in common. First, they act rather slowly often taking six to eight weeks to take effect. In addition their response rate is somewhat lower than

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This paper is based on a talk given at a post-graduate symposium on "Current Concepts in Cancer Management," November 8-10, 1973 in New Haven. The symposium was sponsored by the Office of Regional Activities and Continuing Education and the Section of Medical Oncology, Yale University School of Medicine. The symposium coordinator and editor for these articles is Dr. John Marsh, Associate Professor of Medicine. The support of the Connecticut Division of the American Cancer Society is gratefully acknowledged.

the inducing agents. However, when they are effective, their action may be of quite long duration, measured in terms of months or even years. The maintenance agents that we currently have for use, either alone or in combination, include 6 mercaptopurine, methotrexate and Cytoxan.

During the last 25 years, dramatic changes in prognosis of actue lymphoblastic leukemia of childhood have been seen. This changing prognosis is indicated on Table IV. When only non-specific and supportive treatments were available, such as antibiotics and blood transfusions, the average child with leukemia lived only about 4 months, and survival beyond a year was most unusual. The addition of corticosteroids effected no real improvement even though many children responded for a short time, illustrating the point that the inducing agents by themselves don't significantly prolong life. The introduction of the first maintenance agent, methotrexate, and then methotrexate plus 6-MP, and finally with all of the agents used in sequence resulted in a progressive increase in median survival. More importantly, an appreciable number of children survived for three years or even longer.

Until four or five years ago, most centers employed what could be called "sequential therapy." Following diagnosis of leukemia, a remission would be induced with corticosteroids or corticosteroids plus vincristine. When remission was documented, a single agent such as methotrexate or 6-MP would be given. This would be continued until relapse occurred. At that point, another remission would be induced and then a second maintenance agent would be given continuously until relapse again occurred. Agent after agent would be used in this fashion. When sequential therapy was given, a median survival of about two years was realized and 5 to 10% of children survived for three or more years. A few of these lived five years or even longer. Even in these days of what we currently would consider minimal chemotherapy, an occasional child survived indefinitely. The challenge of modern chemotherapy was not only to increase median survival, but also to increase the number of children who could be classified as long-term survivors.

In 1967 an important report appeared from the St. Jude's Hospital in Memphis, Tennessee. This group had been interested in a complication that occurred very frequently in childhood leukemia. This was the development of central nervous system leukemia. Forty to 50% of children with acute lymphoblastic leukemia at some time during the course of their disease developed this complication. The symptoms are those of increased intracranial pressure, including ocular palsies and headaches. When examination of the spinal fluid is performed, leukemic blast cells can be found. CNS leukemia frequently occurs at a time when the child is in complete hematologic remission with normal bone marrow, blood count and physical examination. The St. Jude's group examined various ways to prevent CNS invovement. This was hypothesized to occur because leukemic blast cells were sequestered in the central nervous system early in the course of the disease. Behind the blood brain barrier, they were protected from the effects of systemic chemotherapy. It was felt that a reservoir of leukemic cells, hidden away in the central nervous system, might represent a focus from which systemic relapse could subsequently occur. If one accepts the possibility of the central nervous system as a sanctuary for leukemia and as a source of subsequent systemic relapse, it might be possible not only to prevent the development of central nervous leukemia by therapy, but to improve the duration of remission.

TABLE IV

SURVIVAL IN ACUTE LYMPHOBLASTIC LEUKEMIA

	MEDIAN			*% DYING*			
THERAPY	*SURVIVAL*	*<6 mo.*	*6-12 mo.*	*12-18 mo.*	*18-24 mo.*	*24-36 mo.*	*> 36 mo.*
SUPPORTIVE	4 mo.	82	18 (100)				
CORTICOSTEROIDS	4	86	14 (100)				
CORTICOSTEROIDS,MTX.	6.5	46	50 (98)	2 (100)			
CORTICOSTEROIDS,MTX.6MP	10	10	55 (65)	30 (95)	4 (99)	1 (100)	
CORTICOSTEROIDS, MTX.,6MP,CYTOXAN, VINCRISTINE, ASPARAGINASE	20	5	30 (35)	20 (55)	20 (75)	15 (90)	10

A number of studies were conducted to see what could be done to eradicate CNS leukemic cells early in the course of the disease. Three methods are currently available. First, radiation of the entire craniospinal axis with 2,500 r; second, intrathecal installation of methotrexate; and finally, a combination of these two modalities. The most satisfactory and effective program involves radiation with 2,000 to 2,400 r delivered to the head. During the period of radiation, 5 doses of intrathecal methotrexate are administered.

When this form of central nervous system prophylaxis was given shortly after diagnosis, striking changes became apparent. Not only was the incidence of central nervous system disease reduced from 50% to less than 5%, but in addition, the number of children remaining in complete remission at 3 years was significantly increased.

Three and one half years ago, at the Yale-New Haven Hospital, we began to use protocols using these newer principles. (Table V) In our current protocol for treatment of acute childhood leukemia, we attempt to produce a complete remission with a combination of prednisone and vincristine given for a period of six weeks. A complete remission, documented by bone marrow examination, will be attained in about 90 to 95% of children with acute lymphoblastic leukemia.

TABLE V

PROTOCOL FOR ACUTE LYMPHOBLASTIC LEUKEMIA

I. Remission Induction 4-6 weeks
    Prednisone 40 mg/m^2/day p.o.
    Vincristine 1.5/mg/m^2/week I.V.

II. C.N.S. Prophylaxis 2½ weeks
    2,000-2,400 r radiation to head
    Intrathecal methotrexate 12 mg/m^2 for 5 doses

III. Maintenance Therapy*
    6-mercaptopurine 50 mg/m^2/day p.o.
    Methotrexate 20 mg/m^2/weekly p.o.
    Cytoxan 200 mg/m^2/weekly p.o.

IV. Periodic reinduction every 6 months
    Prednisone, vincristine as above for 4 weeks

*altered somewhat in high risk cases

When remission is complete and documented by normal bone marrow, four to six weeks after diagnosis, the second phase of treatment begins. Prophylactic CNS treatment is given consisting of 2,000 to 2,400 r. of radiation delivered to the cranium. During this two and one half week period, five doses of intrathecal methotrexate are given in a dose of 12 mg per meter square. Following completion of central nervous system prophylaxis, continuous maintenance therapy is given with a combination of drugs.

Most centers and cooperative groups utilize different protocols for maintenance therapy, but almost all of them use a combination of drugs rather than a single agent. Here at Yale, we have elected to use a combination of 6-mercaptopurine, methotrexate and cytoxan. Finally, every six months the children are completely re-evaluated with bone marrow biopsy, electroencephelograms, spinal taps, liver function tests, X-rays for leukemic status and possible toxicities, and given a four-week reinduction course of prednisone and vincristine.

Forty-one children have been treated in this fashion. Thirty-eight of these have gone into complete remission. Our complete median continuous remission now is 16 months. Extrapolation of these data indicate that we should realize a three year remission rate of about 50%, and accumulated evidence indicates that a substantial number of children who maintain a complete remission for three years will not relapse subsequently.

One of the challenges of therapy in the future will be to improve results in certain groups of children who have an extremely bad prognosis for long term remission. These high risk groups include infants under two years and adolescents, children who present initially with very high white counts (in excess of 30,000/mm), children who have large anterior mediastinal masses at the time of diagnosis and finally, non-caucasian children. All of these groups have a very poor chance of obtaining long-term remission.

Because these programs entail very intensive therapy for a long period of time, one would expect complications. Fortunately we have had relatively few of these. We have lost no children from opportunistic infections during remission. Our major toxicities have been those of the central nervous system, probably related to the combination of intrathecal medication, radiation and high dose systemic methotrexate medication. Many of our children have developed a syndrome resembling moderate encephalitis, characterized by lethargy, somnolence and abnormalities on the electrocephalogram. In addition we have been investigating changes in psychologic and psychometric behavior and have seen some subtle changes which appear to be associated with this form of therapy.

A final question which remains to be answered is, when can chemotherapy be discontinued? At St. Jude's Hospital, the current practice is to stop all treatments after three years of continuous remission. We have elected to give intensive combined chemotherapy for three years. At that point, if the child is still in complete remission we plan to continue less intensive chemotherapy for another two years, and at that time all therapy will be stopped. Whether this is right or wrong remains to be determined.

I have tried to indicate some of the very recent changes in the therapy of childhood leukemia. Such intensive programs may be associated with the risk of considerable toxicity. They require experience and a great deal of time to carry them out successfully. I believe this type of therapy can best be given at centers where there are experienced people who can devote substantial time and efforts to these children. There are about 35 new cases of childhood leukemia each year in Connecticut. At Yale-New Haven Hospital we see about 20 of these. The kinds of improving results we have obtained give continuing impetus to our efforts.

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Current Concepts in the Treatment of Adult Leukemia

Joseph R. Bertino, M.D. and Roland T. Skeel, M.D.

Only a few years ago there was a vigorous debate among physicians as to whether or not patients with adult acute leukemia were more helped or harmed by treatment with drugs. During recent years that debate has largely subsided and most physicians treating acute leukemia agree that therapy is worthwhile. What has brought about this improved outlook for patients with acute leukemia?

Reasons for improved outlook in adult leukemia.

The purpose of this paper is to review several of the most important recent advances in the treatment of adult acute leukemia and to indicate promising areas for future improvement. Perhaps the most significant advance has been the introduction of two new drugs which have good activity in acute non-lymphocytic leukemia[1] (ANLL)[2]: cytosine arabinoside, (Ara-C) and daunorubicin, (DNR). Along with these drugs there is a better understanding of cell kinetics that has allowed improved dosage schedules and suggested ways to combine drugs rationally. Improved supportive therapy has also played a role in this progress, since in adult acute leukemia, unlike childhood acute leukemia, marrow aplasia is usually necessary for remission induction. This means that a treatment center should be prepared to undertake several weeks of intensive supportive care of these patients. Finally, the recent introduction of immunotherapy as an adjunct to chemotherapy has shown promise for longer remissions and longer disease free survival.

Indications for treatment of adult acute leukemia

It is important to realize that adult leukemia is a much more heterogeneous disease than is childhood

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Footnotes

1) The term acute non-lymphocytic leukemia is used to include acute granulocytic leukemia, acute myelomonocytic leukemia, acute monocytic leukemia, and acute promyelocytic leukemia.

2) Abbreviations used

Acute lymphocytic leukemia, ALL
Acute non-lymphocytic leukemia, ANLL
Adriamycin, ADR
Cytosine Arabinoside, Ara-C
Cyclophosphamide, C
Daunorubicin, DNR
6-Mercaptopurine, 6-MP
Methotrexate, MTX
Prednisone, P
Thioguanine, TG
Vincristine, VCR

3) The term "blast" is used to include all immature leukemia cells, as well as the presumably normal hematopoietic precursor cells.

leukemia. Various kinds of adult leukemia are recognized, including a variety which for want of a better term is called "smoldering" acute leukemia. A patient with "smoldering" acute leukemia usually has more than normal numbers of "blasts"[3] in the marrow (> 5%) but may or may not have blasts in the peripheral blood. Such a patient may live for several months or even years without specific therapy maintaining enough normal marrow function to keep him/her from serious bleeding or infection. Since the results of treatment in adult ANLL are not as good as in childhood leukemia, we frequently delay treating the smoldering varieties. If therapy improves and is less toxic, then perhaps we will treat all patients with adult ANLL as we do childhood leukemia. Although there often is a great deal of clinical judgment involved in the decision of which patients to put on treatment programs, there are nonetheless several criteria which we believe are clear indications for initiation of treatment.

1) *A rising blast count.* There is a well known syndrome recognized of patients with acute leukemia with high blast counts who bleed in the brain due to intravascular leukostasis, perivascular accumulation of leukemic cells, and subsequent hemorrhage. In order to prevent this complication when the leukocyte count appears to be rising rapidly and gets above 150,000, it is our practice to put the patient on an IBM cell separator to rapidly remove leukemia cells; on the same day whole brain radiation is administered and chemotherapy is initiated with high dose cyclophosphamide (C), methotrexate (MTX), or Ara-C to rapidly lower the white count.

2) *A platelet count, not sufficient for hemostasis.* Since the risk of serious organ bleeding rises sharply if the platelet count is lower than 20,000/mm,[2] and long term support is not feasible because of the regular development of antibodies to non-HL-A matched platelets, remission induction should be attempted when the platelet count falls below this level.

3) *A granulocyte count of less than 1,000/cubic millimeter.* At granulocyte counts below this level, the risk of life-threatening infection is high, and remission induction becomes the only viable means of treatment.

Drugs active in adult acute leukemia (Table I)

The older drugs, prednisone (P), methotrexate (MTX), mercaptopurine (6MP), all have very low remission induction rates in the order of 3-15%. This low remission rate was the reason for the debate about whether or not the treatment of leukemia was worthwhile. However, the two newly introduced drugs, Ara-C and DNR, have better remission induction rates of 30-50%. DNR does not appear to be schedule dependent and can be used either in a single dose, or the total dose may be divided into three, four, or five daily doses. In contrast Ara-C appears to be highly schedule dependent and should be given either as a continuous five day infusion or twice or three times daily for 5 or more days for each course. The reason for this is that if a cycle-active drug is to be effective, it must be present during the S-phase, or when the cell is making DNA. These considerations may not hold if the drugs are used in combination.

TABLE I

DRUGS EFFECTIVE IN ADULT ACUTE NON-LYMPHOCYTIC LEUKEMIA

Drugs	*Dosage*	% *Complete Remission*
Prednisone	1.0-2.0 mg/kg/day	15
6-Mercaptopurine	3.0 mg/kg/day	10
Methotrexate	5.0 mg/m²/day	3
Cytosine Arabinoside	75-600 mg/m²/day x 4 days	30-40
Daunorubicin	60 mg/m²/day x 2-5 days	50
	180 mg/m² weekly	33

Unfortunately, the effective drugs for the treatment of this disease all have marrow suppression as their limiting toxicity. As a consequence, there is a very great risk of infection or hemorrhage during remission induction of adult acute leukemia. Experience has shown that one must treat to aplasia in order to obtain remission in adult acute leukemia. Therefore, an experienced team is required in order to provide both the physical and emotional supportive care a patient under therapy requires.

Clinical-pharmacological studies of Ara-C and DNR

Ara-C is a pyrimidine nucleoside analog that differs from other nucleoside analogs in that the sugar is altered (arabinose instead of ribose or deoxyribose) rather than the base. When this compound is phosphorylated by tissues to the nucleotide, it becomes a potent inhibitor of DNA polymerase, the enzyme responsible for DNA synthesis. Another enzyme present in most tissues called deoxycytidine deaminase can deaminate Ara-C to uracil arabinoside, an inactive compound. Thus the drug's activity in different tissues will depend upon the relative activities of these two enzymes. Stuart has recently reported that both natural and acquired resistance of certain patients with acute leukemia to Ara-C is correlated with high levels of the deaminase enzyme. Therefore it may be possible to predict responsiveness or resistance to Ara-C by such measurements.

The second important drug for the treatment of adult acute leukemia is DNR. DNR is an anthracycline antiobiotic, isolated from bacterial cultures. Like its relative, Adriamycin (ADR) (14-hydroxydaunorubicin) it probably acts by binding to DNA and RNA. Because it is not cell cycle specific, the total dose, rather than the schedule of administration seems most important. We now administer these drugs as a single intravenous injection once every 3 weeks.

While the acute dose limiting toxicity of DNR is mostly on marrow, another important toxicity of both DNR and ADR, is their cumulative toxic effect on the heart which can result in irreversible cardiac failure. At times transient cardiac arhythmias, which may not be dose related are also seen. Because the major cardiac effect is dose related we usually stop ADR after 550 mg/M^2 and DNR after 900 mg/M^2 has been administered.

Resistance to chemotherapy

Why do drugs fail to work in some patients? The three major reasons for treatment failure are natural resistance, lack of sufficient tumor cell kill, and development of drug resistance. We have been concerned with the mechanism of both natural and acquired drug resistance, and the development of simple *in vitro* predictive tests for resistance. This will be increasingly important, for when patients fail to respond to a combination of drugs, it is important to determine which drugs still have value in their treatment so that the effective drugs can be continued, perhaps in new combinations. To detect MTX resistance, we measure the inhibition of deoxyuridine-^{3}H incorporation into DNA. For Ara-C we determine the inhibition of thymidine-^{3}H incorporation into DNA. For resistance to the thiopurines, enzymes are measured that can convert these compounds to the active form. Asparagine synthetase activity which usually increases in resistant cells is measured to evaluate asparaginase resistance. Prednisone resistance may be possible to detect by measuring steroid binding activity.

Combination chemotherapy—rationale and results

One of the important developments in the treatment of leukemia in children and also now in adults is the use of combination chemotherapy. It's important to point out, that not all drugs when used together will have additive or synergistic anti-tumor effects. Secondly, it may be necessary to use drugs in the right sequence to get additive effects. In the case of asparaginase and MTX, for example, if one uses asparaginase shortly before MTX, asparaginase can negate the anti-tumor effects of the MTX. If one uses them in the opposite sequence, then one can actually get additive or synergistic effects with this same combination. Therefore, before drugs are used in combination, a basis for putting them together should exist, such as 1) a *biochemical* reason, as in the case of thioguanine (TG) and Ara-C, 2) a *kinetic* reason, i.e. the use of a cell cycle specific and a cell-cycle non specific drug in combination, or 3) a *toxixity* consideration, namely, the use of drugs that seem to have additive effects on the tumor cells but with different host toxicities. The delay or prevention of drug resistance is also an important reason for using drugs in combination.

Table II lists some of the drug combinations which have been effective in the treatment of adult acute leukemia. The complete remission rates are now in the range of 40 to 80%, depending upon the series reported. Most of the recent combinations have included either Ara-C or DNR or both, since they have been found to be the most useful single agents in ANLL. In reporting these results, some investigators have chosen to combine the lymphocytic and the non-lymphocytic leukemias, as they believe that in adults, advanced age is a more important determinant of poor response than is cell type. However, we believe that cell type is most important, and have different treatment programs for each type (ALL vs ANLL). In most series studied, people who are over 60 seem to do worse with combination drug therapy as compared to the younger age group. Although in one series reported, older patients (> 50), treated with TG and Ara-C, did just as well as did the younger patients.

TABLE II

COMBINATIONS OF DRUGS IN
ADULT ACUTE NON-LYMPHOCYTIC LEUKEMIA

Drugs	*% Complete Remission*
Cytosine Arabinoside and Thioguanine (q12h)	65%
Cyclophosphamide, Vincristine, Cytosine Arabinoside, and Prednisone	43%
Vincristine, Prednisone, 6-Mercaptopurine, Methotrexate	25-45%
Daunorubicin and Cytosine Arabinoside	59%
Cyclophosphamide, Methotrexate, Cytosine Arabinoside (CAM)	50%
Adriamycin, Cytosine Arabinoside, Vincristine, Prednisone	73%

Several years ago we developed a combination program which was based upon biochemical, kinetic, and animal model (late state murine L1210 leukemia) data. For induction of remission, we combine the cell cycle non-specific agent, cyclophosphamide (C) (Cytoxan^R) with MTX and Ara-C (CAM) (Table II). Patients with ALL were given CAM with leucovorin "rescue" (CAM-L) at 24 hours, because it was found that in these patients, the toxic effects could be abrogated without compromising therapeu-

TABLE III

CAM DRUG TREATMENT SCHEDULES

I. Induction

All patients are treated once a week with

1. Cyclophosphamide—1.5 g/m^2, I.V., hrs. 0-0.5
2. Cytosine arabinoside—300 mg/m^2, I.V., hrs. 0.5-1
3. Methotrexate—80 mg/m^2, I.V., hrs. 0-24

Patients with ALL receive, in addition

4. Leucovorin—25 mg/m^2, I.V., hrs. 24-30

II. Maintenance

Patients with ALL receive the induction regimen at intervals of 3 to 4 weeks

Patients with AML are treated every 3 to 4 weeks with

1. Cyclophosphamide 0.5 g/m^2, I.V. push x 1
2. Cytosine arabinoside—100 mg/m^2, S.C., q12h x 4-6 doses
3. Methotrexate—3 mg/m^2, I.M., q12h x 4-6 doses

tic effect. Patients are given high dose pulses once weekly until marrow hypoplasia is achieved (usually 2 or 3 weeks). Following this, the patients are given vigorous supportive care while awaiting the return of normal (or leukemic) marrow function. If the patient goes into remission we then maintain patients with modified doses of these drugs given monthly over three days. In ANLL cytosine arabinoside is given every 12 hours for 4 to 6 doses along with low dose methotrexate and cytoxan.

Fourteen patients with adult ANLL were treated, some of whom had had previous therapy with TG and Ara-C (Table IV). Of these, ten had adequate treatment defined as a three week exposure to drugs. Seven patients had a complete remission. The median duration of remission was seven months, and the median survival of this group is above eleven months. This overall remission rate of 50% and the remissions and survivals are not significantly different from what most centers are attaining at the present time. One of these patients who did have a remission is still alive without evidence of disease 2½ years from the onset of therapy. However, all the other patients have subsequently relapsed and died from the disease. CAM is also effective therapy in ALL of adults in whom MTX treatment was followed by leucovorin rescue in these patients. Of 8 patients, we had 5 complete remissions, 1 partial remission, 1 patient died of infection during induction. The overall survival of this group is about 22 months which again is about as good as any center is attaining with adults with lymphocytic leukemia.

TABLE IV

RESULTS OF TREATMENT WITH CAM AND CAM-L IN ADULT ACUTE LEUKEMIA

	ALL	*AML*
Patients	8	14
Adequate treatment and follow-up	6	10
Complete remission	5	7
Partial remission	1	0
Died during induction	1	1
Median duration complete marrow remission	4-5 mos.	7 mos.
Median survival from onset CAM (L) therapy	13 mos.	6.5 mos.
Median survival from diagnosis	22 mos.	11 mos.

Based on these studies, we have started a randomized protocol with the Eastern Cooperative Oncology Group, in which we are asking two questions: 1) is this induction therapy with CAM better than TG and Ara-C? and, 2) can we get longer remission durations, if during remission the maintenance regimens are alternated every three months? Our hope here is that we will prevent drug resistance and get longer remission durations.

Immunotherapy of ANLL

Previously the major challenge was to be able to induce complete remission in ANLL. With this now possible in a substantial percentage of patients, oncologists must also concentrate on devising regimens that might further prolong remissions and extend useful survival as has been done with acute lymphocytic leukemia as detailed above. One design to achieve this goal has been to use a variety of drugs simultaneously and in sequence during remission to delay the development of resistance. A second approach to prolong remissions is to attempt to mobilize the host's immune defences against the leukemia cell by active immunization with either autologous or allogeneic leukemia cells, and/or adjuvant therapy with BCG.

Two presuppositions lie behind the concept that the course of leukemia can be altered by active immunization:

1) The leukemia cell contains a tumor specific antigen(s) that is different from non-leukemic autologous cells and,

2) Antigenic differences will allow immunological manipulation to enhance rejection of the leukemic cell by the host with the result that remission will be prolonged and the patient possibly cured.

The first of these presuppositions is well supported by a variety of data which have shown immunogenicity of leukemia cells by mixed lymphocyte culture blast transformation, delayed hypersensitivity skin reactions, cytotoxicity, and attachment to immunologically naive macrophages through the mediation of leukemic serum (cytophilic antibodies). There is only minimal evidence for the second presupposition aside from the limited success of immunotherapy trials.

Immunotherapy of acute leukemia is in the very early phases of development. The few studies that have been done and reported are those of Dr. Ray Powles at the Royal Marsden Hospital in England and Dr. G. Mathe in Paris, the British Medical Research Council and Dr. C. B. Freeman. Dr. Mathe treated patients with acute lymphocytic leukemia who were in complete remission with 1) no therapy, 2) BCG every fourth or eight day, 3) allogenic leukemia cells, 4) or BCG plus allogeneic leukemia cells. There was no difference between any of the groups that received immunotherapy and all of them did better than the patients without immunotherapy. This study was done several years ago and further reports from that center have not had control groups without immunotherapy. The Medical Research Council compared BCG immunotherapy, intermittant MTX, and no therapy after 5 months of intensive cytotoxic chemotherapy. They found that BCG was significantly better than no therapy (27 vs 17 weeks), but MTX was significantly better (52 weeks) than either for remission maintenance ($p > .01$).

The study being done by Dr. Powles in London is being randomized to compare chemotherapy alone vs. chemotherapy plus immunotherapy with BCG and allogeneic leukemia cells given weekly. In the chemotherapy alone group, there were just 7 of 19 patients alive (median 303 days) while in the group who also received immunotherapy, 16 of 23 were alive (median 545 days); this is significant with a p value of 0.003. One of the encouraging features of the program is that when the patients undergoing immunotherapy do relapse from the therapy, the subsequent remissions are much more easily induced than in the patients who receive chemotherapy alone.

The Future

What is the future of therapy of adult acute leukemia? There are several areas from which improved results in the treatment of this disease may emerge. Additional new effective drugs, especially with less marrow toxicity, would make a significant impact on the morbidity now associated with the therapy of ANLL. There is also a need for improved combinations to exploit biochemical, pharmacological and kinetic factors. Although relapses in ANLL are not in the central nervous system for the most part, the role of radiation therapy to the brain in adult myelocytic leukemia may have to be explored. It may be that when peripheral disease is controlled better, more central nervous system disease will be seen. Evidence of this occurrence is being reported in increased frequency at the present time. As mentioned above, better predictive tests for sensitivity and resistance will allow us to select individual drugs and combinations which are more apt to result in clinical response. Finally, immunotherapy and marrow transplantation as adjunctive approaches to therapy of acute leukemia are still in development and offer promise of longer responses and survival to many patients.

What are the new drugs on the horizon and are there any more recent improvements in therapy? Adriamycin and DNR are being modified by chemists in an attempt to get a more effective drug with less toxicity. Azacytidine, another pyrimidine antagonist, has been found to have definite anti-leukemia effects in adults; however, toxicity has been a problem and the remissions have not been long lived. The role of this drug is therefore unclear at the present time.

Here at Yale, two new drugs in the treatment of acute leukemia are in early clinical trial. One is an enzyme, carboxypeptidase G_1, which can induce a folic acid deficiency. Since this enzyme causes folic acid depletion by a different mechanism than does MTX it might be effective in ANLL. The other compound we are testing, that also is exciting in concept, is called triazinate. This compound is also a folate antagonist, but it also has some very striking anti-tumor properties in certain experimental tumors not sensitive to MTX. For example, it will cure the Walker 256 carcinoma in doses as low as 1% of the toxic dose (LD_{50}), yet it has no effect against the murine L1210 tumor. The reason for this difference appears to reside in the ability of certain cells to transport the drug and accumulate it. Since we can measure this transport our hope is that be testing patients' cells *in vitro,* we can select certain kinds of cancers that might be sensitive to this drug. If this drug is effective against childhood lymphatic leukemia, it may be useful in the treatment of meningeal leukemia, when given systemically.

An exciting combination that Dr. Robert Capizzi is studying is the combination of asparaginase and MTX. By giving asparaginase 24 hours after MTX, the asparaginase rescues normal cells from MTX toxicity. Thus far, 7 out of 8 patients with adult lymphocytic leukemia treated with this combination have gone into remission. One of these patients has been in complete remission now (her third) for over 18 months.

We are now also preparing to begin a program of chemo-immunotherapy for adult ANLL at Yale. After remission induction with CAM, patients will receive monthly chemotherapy maintenance as described above along with immunotherapy using allogeneic leukemia cells, BCG, or a combination of the two. They will be studied extensively for immunological response to the therapy in the hope of identifying those parameters which are best correlated with response. We anticipate that this approach will offer newly diagnosed patients the best hope for long term control of the leukemia and improved quality of life.

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Trauma as a Cause of Brain Tumor: A Medicolegal Dilemma

Rembrandt H. Dunsmore, M.D. and Melville Roberts, M.D.

ABSTRACT — Whether or not head injury can cause brain tumor has long been a matter of conjecture. The question arises more frequently as a legal rather than a medical problem. The following case history is illustrative.

Case History

A 58-year-old man was admitted to the hospital because of a scalp tumor.

He was well until approximately 20 months previously when he first noted a scalp mass near the midline in the posterior parietal area. Five months later he was examined by a physician who described the mass as being the size of a ping pong ball. The patient attributed the mass to repeatedly striking his head while working as a crane operator. To gain access to the crane it was necessary for him to stoop beneath a beam situated four feet above the floor. The beam had a number of protruding steel bolts against which he struck his head in approximately the same area as the scalp mass. Because the lesion continued to increase in size he was admitted to the hospital.

On physical examination the only abnormality was an oval mass beneath the scalp approximately in the midline in the parieto-occipital region. The mass measured 8 x 7 x 2.5 cm. and was rubbery in consistency.

The urine was normal. The hematocrit was 45.2 percent; the white-cell count was 8200 and the differential count was normal. Roentgenograms of the skull revealed an increased density in the posterior region of the parietal bone with bony spicules extending from the bone into the overlying tumor. Brain scan showed an area of isotope uptake the size of an orange in the same area. A left carotid arteriogram and electroencephalogram were normal.

At operation it was found that the tumor arose en plaque from the dura over the posterior third of the saggital sinus and invaded the calvarium to extend beneath the scalp. The tumor and involved bone were removed by wide biparietal craniectomy. Tumor remaining on the dura was coagulated with the electrocaudery. Histologic examination of the tumor revealed a meningothelial meningioma.

Except for suffering several grand mal seizures, the patient did well after surgery for 10 months. It was then noted that a few irregular masses were palpable beneath the scalp in the area of the cranial defect and he was re-admitted to the hospital. Repeat brain scan and arteriogram demonstrated recurrent tumor and obstruction of the superior longitudinal sinus. A second craniotomy was performed and tumor was found extending into the parietal and occipital lobes bilaterally. The entire mass was resected, but the patient was left with cortical blindness and in a permanent vegetative state. The patient's family applied for compensation under the Workmen's Compensation Act in the belief

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(supported by the attending surgeon) that the tumor was caused by the occupational trauma.

Discussion

It is not unusual for a patient to attribute the development of a brain tumor to head injury.[1] In the present case the question is obviously of more than academic interest, for the future economic well-being of the patient and his family may depend upon the answer. Unfortunately, because oncogenesis is imperfectly understood, the final decision will be legal rather than scientific.

The relation between trauma and brain tumor has long been debated. In 1888 Keen[2] suggested that a meningioma he removed from a patient who had been struck on the head as an infant had resulted from the trauma. He conjectured that trauma had caused the tumor because it was attached to the skull by an area of hyperostosis. Keen reasoned that the hyperostosis was the result of a fracture of the inner table. It is now known that meningiomas frequently excite hyperostosis in the adjacent skull and that this is unrelated to trauma. In 1934 Marburg[3] published a book: "Accidents and Brain Tumors," emphasizing the relation between brain trauma and the development of tumors, although no convincing evidence was offered. He simply assumed the cause and effect relation if a patient with brain tumor gave a history of trauma even though there was no evidence of specific brain or skull injury in many of the cases. The usually perspicacious Harvey Cushing apparently made the same error when he reported the case of General Leonard Wood.[4] He attributed Wood's parasaggital meningioma to a blow on the head the general had received 12 years previously. He made the assumption merely on the basis of the history without any other supporting evidence. This error has been repeated by many as reflected by the literature.

One of the few cases in which trauma was probably related to the development of tumor was reported by Reinhardt.[5] The patient was injured in a boiler explosion. A wire 1 cm. long was driven into the brain and 20 years later a tangerine-sized "sarcomatous" meningeal tumor was found with the wire at its center. It is conceivable that an oncogenic substance in the wire stimulated tumor growth. In two more recently reported cases[6 7] each of the patients had suffered gunshot wounds of the brain and developed meningioma in the vicinity of the injuries 17 and 21 years later respectively. The only basis for assuming a cause and effect relation was the proximity of the tumor to the injured area. It is noteworthy that the authors made this assumption when there is no evidence that patients with brain injury are any more apt to develop meningioma than the general population. Parker and Kernohan[8] in a review of the significance of head injury in the development of brain tumors reported a large series of brain tumor cases in which a history of significant trauma was found in 4.8%. For comparison, however, they reported a group of 431 patients of corresponding age with other diseases of whom 10.4% had a history of head trauma. In another group of 71 healthy individuals of the same age 35.5% had a similar history of head trauma. From a statistical viewpoint, therefore, head injury would appear to protect against the development of brain tumor.

Thousands of intracranial operations are performed each year during which the skull and brain are significantly damaged. There is no evidence, however, that these patients are any more prone to the development of brain tumor than the population at large. There are also no experimental studies using animals in which brain tumor has been produced by trauma.

Walshe[9] in discussing the relation between trauma and the subsequent development of meningioma presents three poorly documented and unconvincing cases as examples. He had personally examined only two of the patients. He further cites 2 cases reported by Cushing[3] as being more convincing, the case of General Leonard Wood, and that of Captain Jennex. Close examination of these two cases reveals the typical post hoc propter hoc reasoning that has resulted in the conclusion that trauma may cause meningioma. In the case of General Wood, a scalp tumor and the underlying invaded bone were removed from the right parasaggital meningioma area in 1905. At a subsequent operation in 1910 a typical parasaggital meningioma was removed from the area. The General remembered having struck his head on a chandelier twelve years previously. There was no documentation of the exact site, no skull fracture or laceration that left a scar. The general was not knocked out. On the basis of this tenuous evidence Cushing was willing to assume not only that the meningioma arose from the exact site of the blow to the scalp, but that the injury caused the tumor. The second case was just as nebulous. Captain Jennex at age 55 underwent a right fronto-parietal craniotomy for a frontal convexity meningioma. There was a history of a small depressed skull fracture to the right of the vertex, being sustained 31 years previously. How the diagnosis was made is not stated. No skull X-ray films were described or pictured. A scalp scar 2 cm. to the right of the midline was noted. At operation it was found that the bone flap had been positioned incorrectly, necessitating the further removal of bone by ronguring anteriorly. Cushing's operative drawing shows "eroded" bone overlying the tumor but no fracture. One wonders if the "old fracture" was merely hyperostotic bone over the meningioma and that the incision was misplaced because it was centered around the old scalp scar which did not overly the tumor. It is possible that the hyperostosis associated with the tumor was mistakenly diagnosed as a depressed fracture.

Zülch[10] modified a group of prerequisites originally proposed by Mandel[11] in an effort to establish criteria for judging the possible traumatic origin of brain tumors. The list includes:

1. The patient should have been well before the accident.
2. The head trauma must have been adequate.
3. The site of tumor formation must correspond to that receiving the trauma.
4. The time interval between the trauma and the development of the tumor should be adequate.
5. The tumor has to be proved histologically at autopsy or by biopsy.
6. The external force should be defined as sufficient to be considered true trauma.

We agree with Wilson[1] that:

> "such stipulations are valueless, for the true etiology of neoplasia is unknown, injury is a relative term, and the limits of the time factor are unspecified. Many observers assume that injury activates a latent growth, though why it should not rather destroy it I have never been able to understand; it can certainly call attention to symptoms previously ignored."

There are a number of reasons why some physicians have been so willing to attribute the development of a brain tumor to trauma. Physicians as a group are compassionate and the patient's future economic well-being often hinges on the question as to whether or not the tumor was the result of an occupational accident. If removal of the tumor has further increased the patient's disability it is understandable that the attending neurosurgeon will be even more apt to support the traumatic etiology theory if it will result in economic benefit to his unfortunate patient. Auster[12] points out that sympathy in granting claims for alleged traumatic carcinogenesis also often stems from a tacit policy of governmental agencies favoring claimants in industrial or military service categories in spite of a lack of clinical and pathological proof of causal relationship.

The attitude of the legal profession has further obfuscated the question. There is undue dependence upon traditional quoted opinions rather than upon scientific facts.[12] The lawyers' concern is primarily with financial indemnity rather than the scientific intricacies of oncogenesis. His criteria are legal decisions rather than scientific data. This is unfortunate because there is much legal precedent for the traumatic etiology of brain tumor and no sound scientific basis either experimental or clinical to support such precedent.

Summary

Whether or not trauma can cause brain tumor has been long debated. There have been reported many cases of intracranial neoplasm attributed to trauma. Legal precedent has established such an hypothesis, in spite of a lack of supporting evidence. Physicians may support the theory in an effort to economically benefit unfortunate patients. The case of a worker who developed a meningioma after repeated minor occupational head trauma is presented as an illustration of the problem.

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Myocardial Infarction in Young Women on Oral Contraceptives

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ABSTRACT—Three young women, two of whom were heavy cigarette smokers and one who had a family history of myocardial infarction, suffered from transmural myocardial infarction while taking oral contraceptives. No other risk factors were found. Two of the three patients had sudden cardiac arrest and were resuscitated by electrical defibrillation. Our experience suggests that myocardial infarction may occur more frequently in young women on oral contraceptives than is presently appreciated because sudden death may be the first recognized sign of myocardial infarction and prevents these patients from reaching a hospital.

Observation in these three patients and reports of others increase the suspicion that oral contraceptives together with heavy cigarette smoking or other coronary risk factors, may be causally related to myocardial infarction. Oral contraceptives in the presence of other coronary risk factors such as hypertension, hyperlipidemia, diabetes, familial history of coronary artery disease at an early age and smoking should be best avoided. Even in the absence of such factors, the medication should be discontinued if the patient experiences chest pain or chest discomfort.

The prognosis in young women with transmural myocardial infarction, if they discontinue oral contraceptives and smoking, may be much better than in other young patients with myocardial infarction.

Oral contraceptives have been implicated in the pathogenesis of hypertension,[1 2] migraine,[1 2] cerebral thrombosis,[1 2 3] thrombosis of the peripheral vessels,[4] thromboembolism,[15] infarction of the bowel,[6 7] retinal vessel thrombosis,[2 4] rheumatic symptoms,[2] positive tests for lupus erythematosis,[2] gallbladder disease,[5] decreased sugar tolerance, increased serum lipids,[8] hemolytic uremic syndrome,[9] and of late, myocardial infarction.[1 10 11 12] The reported patients with myocardial infarction had some other risk factors such as hypertension, smoking, positive family history, but other risk factors such as diabetes mellitus, polycythemia, thrombocytosis, hyperlipidemia, lupus erythematosis, homocystinuria, subacute bacterial endocarditis or congenital anomaly of a coronary artery were absent.

Myocardial infarction in young, premenopausal women without any of the associated risk factors is very uncommon. It occurred in only one out of 53 young patients in the study of Roth, Berki and Wolff[13] and only in three out of 100 patients in the study of Gertler and White.[14] Despite this rather rare occurrence of myocardial infarction in premenopausal women without predisposing risk factors, we have seen three such patients in the last two years at our institution. All three patients were on oral contraceptives and two were also heavy cigarette smokers. We are reporting these three patients because we believe they further increase the suspicion that oral contraceptives may increase the occurrence of myocardial infarction in young women particularly if they are cigarette smokers or have other associated risk factors such as a positive family history for coronary artery disease.

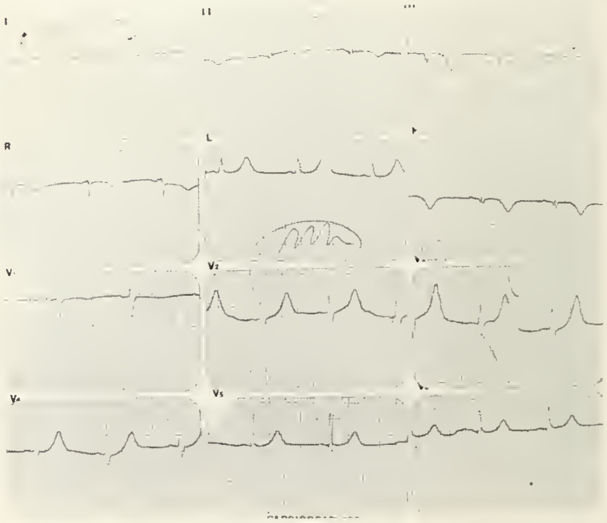

Figure 1 (Case I)

The electrocardiogram taken on December 15, 1971 shows evolution of a transmural inferior wall myocardial infarction.

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Case I

Mrs. C. F., a 41-year-old Caucasian female, was admitted to the Hospital of St. Raphael on December 1, 1971. She had been working in the Emergency Room as a secretary. At about 1:00 a.m., while at work, she suddenly collapsed and became cyanotic. Ventricular fibrillation was documented on the cardiac monitor. The patient had to be defibrillated twice before sinus rhythm and consciousness returned. There was no recurrence of cardiac arrest.

The history revealed that several hours earlier she experienced epigastric pain and heaviness in both arms. She did not report this to anyone but continued to work after self-medication with an antiacid which gave some pain relief. She also stated that she had a similar sensation of 20 minutes duration six months previously. The patient stated that she had been on oral contraceptive pills for the past three years (Ortho-Novum® 2 mg). She had no history of hypertension or any previous myocardial infarction, coronary heart disease or diabetes mellitus. Her family history was negative for coronary artery disease, hypertension, diabetes or hyperlipidemia. The patient smoked more than 40 sigarettes daily and had an occasional drink.

The physical examination revealed a thin person and was essentially normal. The blood pressure was 80/50 and the heart rate was 56 per minute.

An electrocardiogram demonstrated classical signs of a transmural inferior wall myocardial infarction (Figure 1). The serum lipids and fasting blood sugar were normal. The serum glutamic oxaloacetic transaminase (SGOT), the lactic acid dehydrogenase (LDH) and the creatine phosphokinase (CPK) showed typical changes in the follow-studies. The patient was discharged on December 22, 1971.

When last seen in August 1973 the patient had discontinued both smoking and oral contraceptives. She had returned to work and was in good health without chest discomfort. Her electrocardiogram still showed residual changes of a transmural inferior wall infarction.

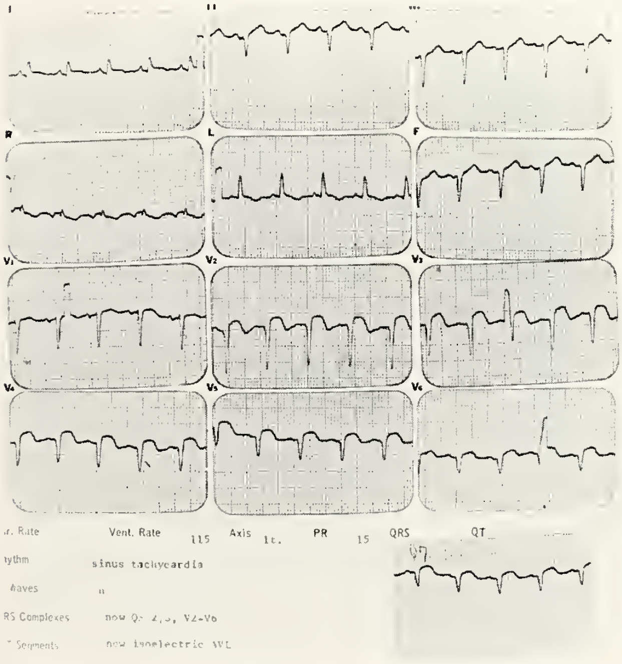

Figure 2 (Case II)

The electrocardiogram taken on December 4, 1972 shows evolution of a left anterior myocardial infarction and left anterior hemiblock.

Case II

Mrs. V. R., a 45-year-old Caucasian nurse, was admitted to the Emergency Room of the Hospital of St. Raphael on December 2, 1972 with complaints of chest pain. She had experienced recurrent chest pain for one week prior to admission associated with severe exhaustion. Four months earlier the patient was awakened from her sleep by a chest pain which radiated to her chin and left shoulder. This pain lasted for one-half hour and was treated by the patient with only an aspirin. In the Emergency Room the patient was seized by a crushing chest pain with radiation to the back, jaw, left shoulder and left arm. Many ventricular premature beats were seen on the monitor. These failed to respond to two 50 mg. intravenous injections of Xylocaine but did respond to two 100 mg. injections of Pronestyl.

The patient gave a history of having been on oral contraceptives for the past eight years. Initially she took Enovid for two years and then Norinyl 1-50. She did not smoke or use alcohol. Her family history revealed that her father had a myocardial infarction at age 70 and her mother at age 53. There was no history of hypertension or diabetes.

A complete physical examination was unremarkable except for the initial presence of ventricular premature beats. The patient was not overweight.

The initial laboratory work revealed an electrocardiogram consistent with transmural anterior wall myocardial infarction with left anterior hemiblock (Figure 2). The lipids and fasting blood sugar were normal. The serum glutamic oxaloacetic transaminase (SGOT) and the lactic acid dehydrogenase (LDH) were typically abnormal.

The patient was discharged on December 22, 1972 but was readmitted three days later, and complained of left calf pain. She was successfully treated for phlebitis of the left calf with intravenous heparin. She was discharged two weeks later on oral anticoagulants.

Nine months after the initial admission the patient is free of symptoms. She is working full-time as a private duty registered nurse. She is not taking oral contraceptives.

Case III

Mrs. K. F., a 39-year-old Caucasian housewife, was admitted on May 4, 1973 to the Emergency Room of the Hospital of St. Raphael with complaints of chest pain. For the entire week prior to admission she had experienced intermittent "exploding like" precordial chest pain with radiation to the right side and left arm. The attacks usually lasted 15 to 20 minutes and were attributed to overwork by the patient. The pain prior to admission was worse than previously and for this reason the patient sought medical care. The initial electrocardiogram at 11:00 a.m. was normal. The patient was placed on a monitor and suddenly became unconscious. Ventricular fibrillation was recognized and defibrillation with 400 watt seconds was successful in restoring regular sinus rhythm and consciousness. The remainder of the physical examination was otherwise unremarkable but revealed a thin individual.

Her family history was negative for coronary artery disease, hypertension, diabetes or hyperlipidemia. Her social history revealed that the patient had been under a great deal of nervous tension due to a drug problem involving her daughter. She also gave a history of smoking 30 or more cigarettes daily for the past 20 years and of using oral contraceptives for the past two years (Norlestrin 1 mg.).

Despite the use of a lidocaine drip, the patient had three more attacks of ventricular tachycardia which were successfully converted electrically. On another occasion she became unconscious but regained consciousness after a thump to the chest. She continued to have premature ventricular beats at times in trigeminal rhythm which finally responded to a lidocaine drip and oral Pronestyl.

A repeat electrocardiogram revealed the typical changes of a transmural anterior wall myocardial infarction (Figure 3). The lipids and fasting blood sugar were normal. The serum glutamic oxaloacetic transaminase (SGOT) and the lactic acid dehydrogenase (LDH) were typically abnormal.

Beside the arrhythmias the patient's course was uneventful and she was discharged on May 25, 1973 after a three-week hospitalization. At present the patient is free of symptoms and is not taking any medication. She stopped smoking and discontinued oral contraceptives. She has resumed her normal activities as a housewife.

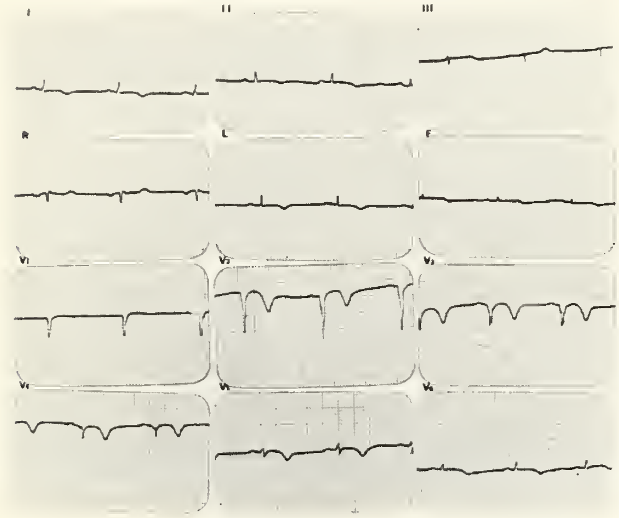

Figure 3 (Case III)

The electrocardiogram taken on May 21, 1973 shows evolution of an anterior wall myocardial infarction.

Discussion

It is of interest that two of the three reported patients developed cardiac arrest due to the ventricular fibrillation shortly after the onset of the myocardial infarction and they probably would have experienced sudden death without prompt electrical defibrillation. This complication has been reported by others.[11] [15] Sudden death in young patients (under the age of 40) with myocardial infarction was frequently observed by us in a previous study.[13] These findings raise the suspicion that myocardial infarction in young women may occur more frequently than is recognized because death may have occurred suddenly outside the hospital in patients in prior good health. None of our three patients died. This is again in agreement with our previous study.[13] Only two of the 53 young patients who reached the hospital alive, died in the hospital, thus giving a false impression of low total mortality if the extremely high mortality outside the hospital is unrecognized.

Two of the three patients in this report, in addition to taking oral contraceptives, were heavy smokers, smoking 20 or more cigarettes daily. This supports Oliver's thesis[10] that oral contraceptives alone do not appear to increase the risk of myocardial infarction but may do so in the presence of other risk factors such as smoking. Spain et al.[16] reports a 9:1 increase of sudden death in women who are heavy smokers as compared to male smokers.

The mechanism by which myocardial infarction may be related to oral contraceptive agents is not clear. Wexler et al.[11] points out that it is paradoxical that estrogens have been ascribed a protective role in guarding women against the development of arteriosclerotic heart disease and while at the same time estrogen containing oral contraceptives are implicated as having a possible relationship to myocardial infarction. These investigators speculate that estrogens prevent or retard the atherosclerotic process but on the other hand accelerate thrombogenesis and myocardial infarction in the rare, susceptible person.

The reasons why only a relatively small number of those young women who take oral contraceptives have thrombotic problems is not clear. Zuck and Bergin[17] suggest that a shift in the balance between the generation of thrombin and its inactivation by antithrombin III may occur.

Although oral contraceptives increase lipids,[18] increased general atherosclerosis of the coronary vessels is probably not the cause of myocardial infarction in young women. Angiographic studies of young women who had suffered from myocardial infarction while taking oral contraceptives showed only isolated, localized changes in one vessel.[11] [15] [18] In another study it was found that a partial obstruction in such a patient was no longer present 38 months later on recatheterization.[15] Recanalization of the thrombus may explain the disappearance of the previously seen obstruction. The absence of generalized atherosclerosis in these young women also suggests a much better prognosis in those who survive the infarct without too much distruction of myocardium. If such patients discontinue oral contraceptives and cigarette smoking, their life expectancy may be much better than other young patients who sustain a myocardial infarction caused by other factors. The probability of recurrent myocardial infarction appears to be small. However, only long range follow-up studies of all the reported patients could confirm this impression.

It is of interest that all three patients had symptoms of chest pain which were misinterpreted as "indigestion" or as muscle pain. These symptoms were self-medicated and were not reported to a physician. Thus, the probable prodromal symptoms of the subsequent myocardial infarction were unrecognized. Physicians, therefore, should alert patients on oral contraceptives to report any new symptoms of chest discomfort or pain and instruct such patients to discontinue their medication.

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Demonstration of a Vesicocolonic Fistula During a Bone Scan

A Case Report

Savita Puri, M.D., Vicente Caride, M.D. and Richard P. Spencer, M.D., Ph.D.

ABSTRACT—The excretion of ^{99}m Tc-pyrophosphate and its analogues can provide ancillary information on the urinary system during the course of bone scans.[1] We have had the opportunity of visualizing the urinary bladder with a vesicocolonic fistula, while performing a bone scan with the radiopharmaceutical.

Case Report

A 68-year-old woman was admitted to this medical center for the first time because of urinary incontinence, hematuria, and the vaginal leakage of fecal material. In September 1971 the diagnosis of endometrial acanthoma was made, and total hysterectomy with bilateral salpingoophorectomy was carried out. In February of 1972 there was vaginal recurrence, treated by radium insertion. The calculated dose was 130 rads/hr for 24 hours or 3,120 rads. This was applied twice, with 2 weeks separation. She was relatively well until November 1973 when bladder symptoms were noted. Tumor tissue in the bladder was fulgurated. In January 1974, a 9 cm pelvic mass was noted. She was treated by opposed parallel fields of cobalt radiation (4,000 rads over 33 days). When first seen here, 2 months later, she appeared cachectic, but in no acute distress. Temperature was 100°F, pulse 112/min. and blood pressure 100/70 mm Hg. Examination of the abdomen revealed bilaterally palpable kidneys, without costovertebral angle tenderness. Pelvic examination showed a foul smelling, tender and friable mass occupying the posterior wall of the vagina. A rectovaginal fistula was recognized. The rectal and vaginal tissues were indurated and tender. An IVP revealed bilateral hydronephrosis with a filling defect on the right side of the bladder. The right kidney was placed low. A bone scan was performed 3 hours after intravenous administration of 15 mCi of ^{99}m Tc-pyrophosphate (Figure 1).

Discussion

In addition to the scan shown in Figure 1, multiple angulated gamma camera images were obtained of the pelvis. The passage of a large quantity of radio-

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DR. SAVITA PURI, NIH fellow in Nuclear Medicine. DR. VICENTE CARIDE, Resident in Nuclear Medicine. DR. RICHARD P. SPENCER, Professor, Diagnostic Radiology (Nuclear Medicine), and director of Nuclear Medicine, Yale-New Haven Hospital.

Supported by USPHS CA 14969 and GM 2094 and by DT-34D from the American Cancer Society.

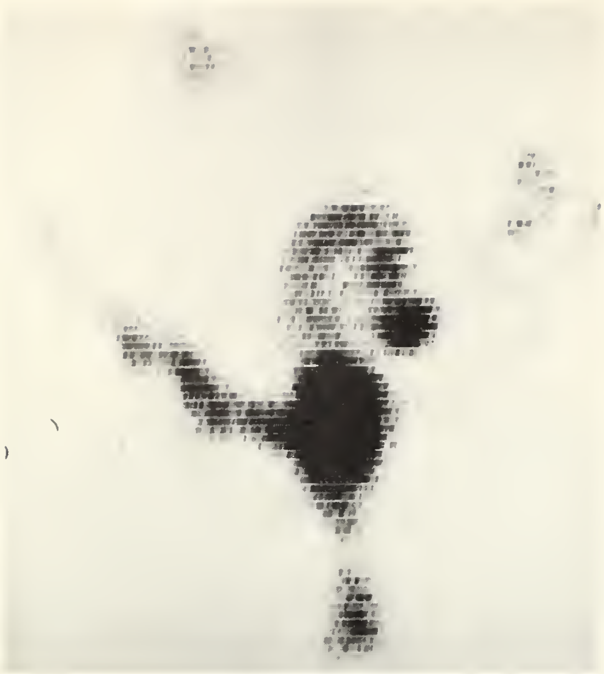

Figure I

Anterior rectilinear scan of the pelvis, performed 3 hours after intravenous administration of ^{99}m Tc-pyrophosphate. Intense activity can be seen in the bladder in the midline. Below it is radioactivity into the vagina. Extending upward (and toward the patient's left) from the bladder is a well defined band of activity. Asymmetric uptake in the bones of the pelvis can also be seen.

activity outside of the bladder can be noted. This appeared to represent activity in the colon. At the time of the operative repair of the rectovaginal fistula in this patient, a vesicocolonic fistula was also identified and corrected. The dramatic demonstration of this fistula as an ancillary finding during a bone scan, again points out that useful data concerning the urinary system can be accumulated when using ^{99}m Tc-pyrophosphate and its analogues.

Summary

During a bone scan with ^{99}m Tc-pyrophosphate, a collection of radioactivity extending outward from the bladder was noted. This proved to be due to entry of material into a vesicocolonic fistula.

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The President's Page

The PSRO debate was a mere skirmish as compared to the coming discussion on National Health Insurance (NHI). It is not nor can be the objective of this page to discuss and compare all of the NHI bills in the hopper of the national legislative process. There are certain general things, however, that can be said of these bills as a whole. And of this we can be sure—there will be NHI legislation within the next few years.

One thing that most of them have in common is mentioned almost as a detail, and that is that the Secretary of HEW will determine what is a reasonable charge for a specific service. So of this we must beware and either adapt or fight. In my opinion, even though we may lose, we should fight this basic issue which strikes at one of the cores of the matter. For if the Secretary should take a lead from the Connecticut Welfare Department as to what a reasonable charge is, physicians on the whole would be indeed hard pressed financially and have an unjust standard of living forced upon them.

What we want is to have the quality of patient care preserved on at least its present high level. We want this care to be available to an educated public which will include everyone. We also want to preserve a reasonably high standard of living for ourselves. Physicians seem to have the unjust image of being a bunch of fat cats who consistently want to increase their cash kitty. I think that physicians on the whole are more reasonable than this, and that the one or two percent who are not can be controlled through peer review mechanisms.

We must remember that during the year when the Legislature of Connecticut directed the Welfare Department to pay usual and customary and reasonable fees for services rendered, the expenditures for medical care were the only part of the whole budget that were underexpended, while at the same time many more people took advantage of the high quality medical care that was available to them.

People must be financially protected against catostrophic and major medical illnesses. They should be insured for ambulatory care. But in governmental handling, the bureaucracy in order to maintain itself gobbles up a high percentage of the finances available.

The people of the United States have to decide whether they want high quality medical care or not. If they do, they have to pay for it in one way or another. Hopefully a high percentage of this expense won't go to the maintenance of bureaucratic structuring, but the Congress continually falls into the trap of creating expensive bureaucracies. This is one reason the job should not be put in the hands of the government. But this is the trend of the social revolution, and it is overpowering.

The people should be educated to know when they need medical care and how to take advantage of the medical care that is available.

Physicians have shown and are increasingly showing that they are willing to manage the peer review process in an effort to control their own deficiencies and to upgrade the quality of medical care.

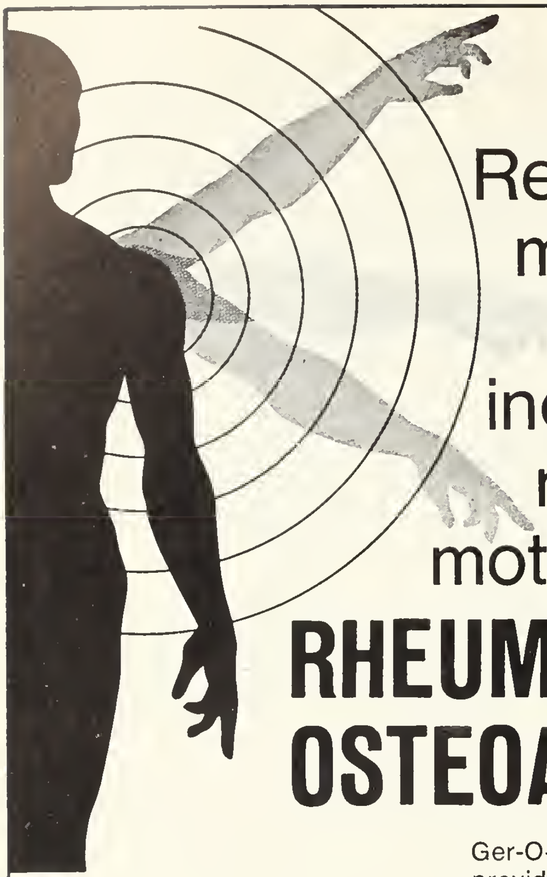
In any NHI legislation we must strive to protect the doctor-patient relationship and not let the art of medicine be lost in an avalanche of too rigid guidelines.

Will our voice be heard? God only knows. But it certainly won't be heard if we whisper and if we don't improve liaison fast. Many well meaning legislators are prey to the lofty and sometimes impractical and dangerous dreams of well meaning planners who are dismayed that a public, uneducated in matters of health, fail to seek out available medical care. Their answer is that the medical care is not available. People have to want to be helped and must take some responsibility in the process.

In areas that are actually deficient in facilities for medical care we should be the first to strive to fill the gaps by any possible efficient modality.

We must follow the progress of the NHI in the legislative process and be ready with our input.

James H. Root, Jr., M.D.
President



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1. Gordon, E. E. and Haas, A., Indust. Med. & Surg. 28:217, May, 1959.

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Connecticut Medicine

Editorials

Acute Leukemia in Connecticut—1974

About 350 new cases of leukemia are diagnosed in Connecticut each year, half of them of the acute varieties. Not too many years ago, this diagnosis was tantamount to a death sentence, but it is now fair to state that substantial progress has been made in the treatment of these diseases which leads to hope that cure may become a reality, in spite of ignorance about the basic cause. The factors which have contributed to this improved outlook include more and better drugs for attack of the diseases, better understanding of the biochemistry and kinetics of both normal and leukemic cells, improved management of complicating infections and hemorrhage with antibiotics, isolation techniques, platelets and granulocytes, and beginning utilization of immunologic factors which may enhance host defenses against the leukemia cell.

The continuing improvement in median survival in childhood lymphoblastic leukemia has been quite spectacular. It is now apparent that increasing numbers of children are being induced into and maintained in years-long remissions, a substantial number of which will result in cures. Key strategies have included the sequential use of drugs which produce rapid induction, followed by aggressive maintenance. Appropriate prophylactic treatment with radiation and intrathecal drugs of the central nervous system, now recognized as a "sanctuary" for leukemic cells, seems to be critical. Some of the most successful results have been reported by the group from St. Jude's Hospital. Their regimen has served as a guide for the treatment plan used at Yale, as reported by Dr. Howard A. Pearson in this issue of *Connecticut Medicine.*

The situation in adult acute leukemia, primarily myeloblastic or one of its variants, is less favorable. Median survivals are now comparable to what was achieved ten to fifteen years ago in childhood lymphoblastic leukemia. The important point, however, is that *progress is being made*, abeit slowly and agonizingly. An attitude of therapeutic nihilism is rarely justified; no patient population, even the elderly, fails to achieve remission. Investigational therapy is still very much needed and justified; yesterday's experiment is today's "standard therapy." Tomorrow's patient will benefit from today's experience. Although complete remissions are now induced in about half the patients, the difficulty lies in the necessity to produce virtually complete marrow aplasia in almost every patient, during which time the susceptibility to infection is greatly increased. Another major problem is to maintain remissions once they are achieved. Drs. Bertino and Skeel outline in this issue some of the reasons for the recent improvements in therapy and promising developments for the future.

Treatment of acute leukemia currently must be undertaken by physicians who are experienced in treating this complex group of disorders in hospitals which are equipped with the numerous supporting facilities necessary for the total care of the patient. It is hoped that in the future our understanding of the acute leukemias will have progressed to the point that treatment will need to be much less centralized.

John C. Marsh, M.D.

Statement on Male Homosexuality

The officers and Board of Trustees of the APA have voted to remove "homosexuality" from the Diagnostic and Statistical Manual on the assumption that it is not a psychiatric condition.

The long-term research by my colleagues and myself published in 1962, *Homosexuality—A Psychoanalytic Study of Male Homosexuals*, the studies of Ovesey, Hatterer, Socarides and others, and my own extensive clinical experience with male homosexuals, strongly support my position that homosexuality is a psychiatric condition. Our studies have shown that repetitive sexual behavior engaged in with same sex partners, occurring in adolescence and adulthood, is always a manifestation of psychopathology. The term psychopathology seems to invite confusion between its meaning and mental illness which is a lay term for a pervasive, disabling psychiatric condition or an outright psychosis. In my view, homosexuality is not a mental illness; it is a heterosexual dysfunction arising out of fears about heterosexuality and, in a central way, it indicates disturbances in interpersonal relationships with individuals of the same sex. It is the consequence of specific kinds of psychopathology in the parent-child relationship. As a sexual adaptation, it becomes a way of achieving gratification substitutive for inhibited and dislocated heterosexuality.

At the same time, homosexuality is a constellation of behaviors that serve as an attempt to repair defective same-sex relationships.

IRVING BIEBER, M.D.

DR. IRVING BIEBER, Clinical Professor of Psychiatry, New York Medical College; Chairman of Research Committee on male homosexuality, Society of Medical Psychoanalysts; a past president of the Society of Medical Psychoanalysts; a past president of the American Academy of Psychoanalysis.

Letters To The Editor

Letters to the Editor are welcomed and will be published, if found suitable, as space permits. Like other material submitted for publication, they must be typewritten *double spaced* (including references), must not exceed 1½ pages in length and will be subject to editing and possible abridgment.

CONNECTICUT MEDICINE

To the Editor: Years ago I wrote a letter to John Talbott shortly after he became editor of *JAMA* blaming him for making it a publication that I could no longer cast aside without a twinge of conscience. Now I must do the same to you. *Connecticut Medicine* improves with every issue, and your last one is outstanding. I was particularly interested in the article on heterologous transfusions, and the little piece about the physicians who fought in the Crimean War was fascinating.

John G. Freymann, M.D.

Hartford Hospital
Hartford, Conn.

CHEMICAL FACE PEELING

To the Editor: I have read with some interest the article by Drs. Ludin and Krause entitled "Chemical Face Peeling" in the July issue of *Connecticut Medicine* (38:353, 1974). It offers no new information regarding a procedure which is relatively standard in the plastic surgeon's armamentarium and has been for a decade. Information regarding this procedure, and in equal scientific depth, is readily available in all textbooks of plastic and reconstructive surgery, many lay periodicals and even in the medical columns of daily newspapers.

My concern is the vague implication in the paper that this is a trivial procedure. The detailed outline of the ingredients and fairly specific instructions for application cannot help but be construed as a recipe which one might follow with success. Ignored or minimized are the fairly substantial complications which may follow this procedure.

I do believe that more emphasis on the potential complications was indicated.

Thomas J. Krizek, M.D.
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Chief, Section of Plastic and
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Yale University School of Medicine

New Haven, Conn.

Toward Better Writing

An editor who reads raw material becomes greatly aware that physicians need to improve their communicative skills. Even the casual reader of medical books and journals gets a vague feeling that most writing is obscure and dull, much of it utterly impenetrable or repulsive, and only occasionally is it attractive and informative. Why is writing so bad?

The answer relates to the defects of modern American education. Professor Lanham[1] studies in considerable detail certain of these defects. As a professor of English, he has a special disgust with the college freshman composition courses and, even more, with the standard texts that serve as guides to "good" writing. These texts that prescribe what is right and what is wrong Mr. Lanham calls "The Books" and on them he heaps both wrath and scorn. "The Books" concern themselves with a pseudoscientific "clarity" to which they sacrifice all other values. They achieve as a result the wooden and lifeless style that lacks any sort of personality. "Clear communication" becomes a shibboleth and "rules" for achieving it almost always guarantee a dead and objectionable style.

In reviewing the various traditional "do's" and "don'ts," Lanham slaughters some sacred cows, but not always with finesse—sometimes a bludgeoning rather than a neat kill. He makes his point that writing should express pleasure: "the deepest motive for writing is not communication at all but the pleasures of writing for its own sake." He plumps for joy and delight in words and makes the excellent point that sounding well when read aloud is a sort of touchstone for a good style.

Mr. Lanham's book tells us a lot that is wrong with college English courses, with much pedantic instruction, with much professional writing, and with "The Books" that serve as instructional manuals. However, apart from pointing to some vague ideals (with which everyone will not agree), he does little in a positive fashion to effect any sort of remedy. For those who care about good writing, his strictures can serve as a stimulus to redouble their own effort. (And dare I whisper, parenthetically, that I do not consider his book particularly well written).

Rudolf Flesch is well known as a writer on writing who created a "readability formula," built on "words-per-sentence," and on "syllables-per-100-words." The formula indicates whether any given writing is very easy or very difficult to read, or somewhere in between. The present book,[2] in essence, reprints the original edition of 25 years ago, with added commentary for each chapter to bring it into present day relevance. Flesch identifies many characteristics of bad writing and good writing, with many examples, sometimes quite to the point, sometimes long and wearisome. Interestingly enough, Flesch antedates Lanham by a quarter century as they agree on the importance of writing by ear, and also on denigrating some texts that set up "standards."

Flesch, although strong on general exhortation, is a little weak on concrete advice. It is not enough to give examples of good and bad writing. These make for pleasant reading but do not answer the question, How can *you* make *your* writing better? There are fine generalizations, but a general weakness in translating these into concrete help.

The task of raising the level of writing is still mammoth. Toward this task the two books mentioned here will give good orientation, although in rather different spheres.

LESTER S. KING, M.D.

1. Lanham RA: *Style: An Anti-Textbook*, 142 pp, $6.95. Yale University Press, 1974
2. Flesch R: *The Art of Readable Writing: 25th Anniversary Edition*, 271 pp, $7.95, Harper & Row, 1974.

Reprinted from JAMA, 229: 852, 1974

Reflections From The Dean's Office

Robert U. Massey, M.D.

Several of my colleagues, who know much more about management by objectives than I shall ever understand, have said that *excellence* can be neither a goal nor an objective, and that because few could agree on its definition, no one could ever declare with certainty that it had been achieved, or even that proper steps had been taken to reach it. In 1962, the Professional Advisory Committee wrote, "The general objective of excellence in medical and dental education can be the only goal that will meet the greatest needs of Connecticut and the nation in the long run."

Objectives, we are told, must be clearly identifiable, as a buoy marking a channel or city to be taken; or quantifiable, as profit or class size. That being so, it would be helpful to have another term for those shadowy and less *objective* ends toward which we strive and which I suspect Emerson had in mind when he counseled "Hitch your wagon to a star." The word *goal* might serve that purpose, being of uncertain etymology and related more to the playfulness of games than to the grim and serious business of battle.

For the dictionary reminds us that, as with other words of Latin origin carrying the -ive suffix, *objective* is an adjective first, and only by elliptical usage, a noun. As used above, it refers to an *objective point,* which is a military term. The goal of the military effort, on the other hand, might be freedom or, in an earlier age, glory.

Perhaps this is why managers talk of "management by objectives" rather than "management by goals." Objectives can be precisely defined; goals may be qualities such as goodness, beauty, truth, or excellence, and have to do with the merits of people and their works rather than with the quantity of their product.

If excellence is the declared goal of a medical school, it will have to be found only in those who make up the enterprise. Each teacher, and also each student, has been selected because of his or her special qualities or preeminent talent in some specialty or field of knowledge in which the school has decided to excel.

In the appointment of faculty, in decisions about promotion, in the admission and retention of students, the answer must always be affirmative to the question: is this the best persen we can select at this time?

A professional school or university whose members are selected one by one through decisions which tend always to choose the eminently qualified will itself be excellent. Expediency tends to mediocrity, and mediocrity breeds more of the same. The community of teachers and students is the university. Of course more is required: a library, laboratories and classrooms, hospitals and clinics, desks, equipment, staff and patients. There are also required decisions about formal courses of study. These are the necessary elements of any medical school; the only sufficient source of excellence, however, is the faculty and the students, not the programs or the "plant."

This sounds naive and simple, and perhaps it is; but seeking excellence is difficult. The more sophisticated and complex approach is to develop in detail plans for all the programs of an academic health center, then describe all the jobs to be done, and how they relate to each other. The best way, I am told, is to build a computer model. After that, the recruiting effort may be undertaken to select people whose qualification most precisely fit the job descriptions. This process takes time, generates mountains of paper and committee reports, makes the computers hum, gives the impression of herculean effort, and is relatively easy. The workers are found to be plentiful.

The result is an efficient mediocrity which later becomes an unprofitable mediocrity—a poor bargain for the public who pays the bills. That is why the planners counseled excellence for the University of Connecticut Health Center.

ROBERT U. MASSEY, M.D., Dean and Professor of Medicine, University of Connecticut, School of Medicine, Farmington, Connecticut.

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Legislative Threats to Research on Human Congenital Defects

Alan G. Fantel, M.A., Ph.D. and Thomas H. Shepard, M.D.

Introduction

The future of research involving human fetal organs and tissues is currently in jeopardy because of legislative attempts to place severe restrictive limitations upon this type of study.[1] Pending legislation in both the Senate and House of Representatives, if enacted and enforced, could effectively terminate future experimentation involving human embryos, fetuses and premature infants. It is the purpose of this article to describe some of the biomedical areas where this type of research has proved beneficial. An established program for coordinated collection, distribution and research on human embryonic and fetal tissues will be described, along with the ethical and legal safeguards which are employed in this program.

Background of the Problem

Experimentation involving fetal tissues has been increasing in the United States and in other countries for at least 20 years. Only recently has this research been seriously challenged. The reasons for this are numerous and complex, but a number of points can be made.

The liberalization of the abortion laws, particularly following the recent Supreme Court decision on the subject (Roe vs. Wade), opened up a new resource for prenatal study. In addition, it stirred up a moral hornet's nest among those who felt that abortion for any reason was unjustified. Further indignation was caused by the discovery that human fetal research was an active and now growing area under the aegis of federal funding. There was particular concern about published reports of work on extracorporeal fertilization and blastocyst maintenance,[2] and some people read shades of Orwell's *1984* into it. The ethics of study of the human fetus during its maintenance in an artificial environment were debated in the British Parliament.

Also, at this time there were public revelations of the Alabama syphilis studies which had been carried out in the absence of anything approaching informed consent. As a result, medical research ethics were very much in the spotlight, and the faction opposing both abortion and fetal research armed itself with the thorny issue of the availability of fetal informed consent. The problem was also felt in Great Britain where an advisory group of the Department of Health and Social Security Office issued a set of guidelines for future work with human abortuses.[3]

Governmental Controls

In order to deal with these objections, the National Institutes of Health formulated a strict and detailed set of proposed guidelines for federally funded research involving human subjects and embryonic and fetal subjects in particular.[4] Among other requirements, research directed at *in vitro* maintenance of physiologically intact human conceptuses was severely restricted. Research involving viable conceptuses was allowed only when directed toward clear-cut therapeutic goals. The determination of viability of a conceptus was assigned to the attending physician who was prohibited from participating in research on that conceptus. Parental consent was required for any procedure involving the aborted products of conception. Extramural and intramural committees were proposed to judge the ethical standards of fetal research, much as in any project involving human subjects.

While the regulations substantially complicated the fetal collection process, physicians and scientists involved in abortus research found some relief in them since they standardized conditions and tended to remove individual ethical decisions. At the same time, they permitted research to continue largely as it had previously. Despite the N.I.H. regulations, there is still a faction that feels that the rules fail to go far enough and that fetal research should be completely outlawed on a national basis. Notably, Senator James Buckley of New York has initiated a Senate bill with this intent, as has Representative Angelo Roncallo of New York in the House of Representatives. The product is currently House Resolution 7724 which speaks to this issue.

What is at Stake?

One can get some insight into this question by reviewing some of the past accomplishments, a task which has been undertaken by the American Academy of Pediatrics (AAP) Committee on Fetus and

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Newborn. As pointed out by this body, many of the findings which have permitted progress in biomedical fields represented "pure" fetal research, at least in the early stages.

Amniocentesis, one of the major breakthroughs by fetologists, was originally used for the measurement of intrauterine pressure during labor. Today it enables physicians to make intrauterine diagnosis of over 40 familial disorders as well as chromosomal aberrations.[5] A disadvantage of this technique is that it is performed after conception, and many patients and doctors feel therapeutic abortion is not a morally acceptable technical tool. However, many parents are quite strongly motivated to prevent the birth of an unhealthy and/or unhappy child and willingly take all the precautions when dangers are apparent. The study of these subsequently aborted fetuses could be interpreted as fetal research. Further, it allows both detection and treatment of Rh incompatibility, which represents one of the first inroads to fetal medicine.

A fundamental area is in human embryology and development. It is largely by the understanding of normal development that anomalous development can be understood. Prevention and treatment are the products of this knowledge. Today it is possible to recognize and classify literally hundreds of syndromes and individual defects of prenatal origin. Embryologists and teratologists have made significant strides in defining critical periods and nutrients for normal development, and these cannot be abstracted from animal models. Clearly, the finer the definition of embryonic and fetal developmental mechanisms, the more powerful will be our ability to prevent the consequences of deviation from these norms. The definition of the critical period of embryogenesis coupled with illustrations of thalidomide or aminopterin-induced anomalies has led to what many feel to be a healthy conservatism in prescribing medications and therapeutic procedures during this period.

Immunologists and placentologists have been studying the phenomenon of maternal nonrejection of the fetoplacental unit for a number of years. In addition to being an area of interest to developmental biologists, it is felt that this work may have significant implications for the prevention of premature parturition, as well as for the understanding of the mechanics of tumor rejection or its failure.

Cancer workers are actively studying antigens which are common to carcinomas and certain embryonic and fetal tissues. Early diagnosis of cancer may ultimately depend upon further studies in this and related areas.

Fetal monitoring during labor is an obvious outgrowth of what was originally relatively "pure" physiologic research. This work, along with that in amniotic fluid constituents and placentography, now allows considerable precision in the determination of the infant at risk. The direct benefit is that after identification of these infants, appropriate therapy can be made available, and this has obvious advantages to parents and society. Through study in humans, great strides have been made in understanding the cause, diagnosis and treatment of respiratory distress syndrome.

Important advances in perinatal pharmacology have been derived from experimental procedures on the fetus. The understanding of fetal pharmacology led to a model of the interrelationships of drugs, bilirubin metabolism and kernicterus, and the prevention of the condition. A further example is the role of oxygen limitation in the prevention of retrolental fibroplasia.

Currently, an increasing number of children born with previously fatal immune deficiencies are alive because of the experimental development of fetal liver[6] and thymus transplantation techniques.[7] Both the research leading to these procedures and the tissue transplanted are dependent upon the availability of fresh tissue from therapeutically aborted human fetuses.

Animal testing for the teratogenicity of drugs is recognized as less than adequate for the protection of humans. While no teratologist is calling for drug or chemical testing in man, surveillance and study of drug effects on the human embryo and fetus are essential if a second thalidomide tragedy is to be prevented. Certain new or established drugs are of such therapeutic importance that they must be used cautiously in pregnant women, and surveillance for their effects must be maintained.

Many recent advances in virology have been dependent upon human fetal material. Virologists have found that specific fetal tissues provide almost ideal culture conditions for human-specific viruses. Thus, adenoviruses have been most successfully cultured in human fetal kidney, cytomegalovirus in human fetal lung and respiratory viruses in human fetal tracheal tissues. Hepatitis virus has been grown in tissue culture of human fetal origin, and other sources of human tissue such as foreskin are limited in their usefulness.

The uses of embryonic and fetal tissues in biomedical research are many and varied, but it is not our intent to document them exhaustively. It is necessary to point out that, at least definitionally, new work, even when clinical, is experimental. Research which appears "basic" often has immediate and important implications for medical practice.

A Fetus Collection System

At the University of Washington, there is a central facility for the collection, analysis and distribution of embryonic and fetal specimens.[8] The Central Laboratory for Human Embryology, funded by the National Institutes of Health, has performed these functions for 10 years. During this time, over 2400 specimens have been collected and examined. Therapeutically and spontaneously aborted embryos and fetuses are collected by laboratory personnel from various hospitals and clinics in the Seattle area. The staffs of these hospitals and clinics are generally very helpful in making the material promptly available; a necessity since most tissue is received and distributed in an unfixed condition.

When specimens arrive, they are immediately examined grossly and under the stereoscopic dissecting microscope. The gestational age is determined by means of the crown-rump length standards which the laboratory has developed in conjunction with the work of others.[8] If the specimen is fragmented, often the foot length can be used to derive the crown-rump length. If there is evident pathology, further study is undertaken. If indicated, histologic, biochemical, microbiological or karyotypic analysis may be undertaken. Placentas and membranes are examined and described. All of the information, along with any relevant clinical data, is logged into the permanent record books, along with the parental consent forms. Useful resulting information is returned to the forwarding physician. All entires are kept confidential.

The laboratory maintains an active file of requests for fetal organs and tissues from people in other laboratories. The individual request forms designate the criteria for a specific project, and if possible the investigator is called promptly. Priority is given to individuals carrying out electron microscopic techniques and those studying labile enzymes and processes. In this way, we have supplied over 120 individual scientists during the past 10 years.

As indicated above, the Central Laboratory is not only an abortus collection and distributing facility but also a teratological screening and experimentation center. Rat, rabbit and monkey colonies are maintained for teratological analysis of drugs and chemicals according to established protocols. Perhaps most important is the careful screening of abortuses by trained personnel. It is felt that this sort of approach could be used to intercept an active teratogen before it produced an epidemic of the proportion of the thalidomide disaster.

If an embryolethal or teratogenic drug, chemical or pathogen were acting in the environment, it might be possible to detect it initially either in an increased spontaneous abortion rate or as a specific anomaly or syndrome in abortuses. By referring to patient records or interviews, it could be possible to construct a specific hypothesis of teratogenicity, issue warnings and initiate animal studies of the teratogen in question.

Summary and Conclusions

Our ability to conduct research on the cause, prevention and treatment of congenital defects in humans is currently threatened. It is felt to be the responsibility of concerned scientists and physicians to educate the general public about the importance of fetal research. For this reason, we have reviewed a few of the benefits derived from research on the human fetus. An established program for coordinated collection, distribution and research on human embryonic and fetal tissues is described. We feel that teratologic surveillance is an important responsibility in a highly technological society and that it must not be jeopardized by political expediencies. Embryonic and fetal research, as well as teratologic surveillance, should be encouraged as socially responsible and valuable work.

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Use of Fetuses and Fetal Material for Research

EDITORIAL BACKGROUND: This is a summary of a 1972 report[1] of an advisory group appointed by public authorities for Scotland and Wales in May 1970 "to consider the ethical, medical, social and legal implications of using fetuses and fetal material for research."

Though difficult, the group decided it would first have to set out certain definitions:

The Fetus: the human embryo from conception to delivery.

A Viable Fetus: . . . capable of functioning as a self-sustaining whole independently of any connection with the mother.

A Pre-Viable Fetus: though showing some but not all signs of life, is incapable of or cannot be made capable to function as a self-sustaining whole independently of the mother.

Fetal Death: showing no signs of life and is incapable of being made to function as a self-sustaining whole.

Fetal Tissue: a part or organ of the fetus, e.g., the lungs or liver.

Fetal Material: any content of the uterus resulting from pregnancy excluding the fetus, i.e., placenta, fluids and membranes.

Research Involving the Use of the Dead Fetus and Fetal Material: Fetal tissues mostly are used since tissues and cells may continue to live after the fetus itself has died, even if separated from it. The use of the fetus as a whole is necessary only in few cases. Fetal tissues are used especially in preventive medicine, especially in the field of virology. They are used in the routine diagnosis of and research on viruses pathogenic to man, the largest present user being the public health laboratory service. The properties of both established and new vaccines against viral infections are investigated in fetal tissue cultures as they provide excellent purity tests for the vaccine—as examples, vaccines on influenza, poliomyelitis and rubella are manufactured from fetal tissue. Fetal tissues are used in cancer research, in arterial degenerative disease, in immunology, and in the study of congenital deformities.

Research on the Fetus in Utero: Since 1958 the Medical Research Council (of Great Gritain) has provided a grant to support the collection, preservation, and distribution of fetuses, fetal tissues and fetal material by the Royal Marsden Hospital, London.

Legal Background: There are four parts: criminal, civil, administrative, and disciplinary. These are separated in three legal jurisdictions—England and Wales, Scotland and Northern Ireland, just as the law would be separate for each state in the United States.

Implications of Research: As in the United States, there is public concern surrounding the use of fetuses, fetal tissues and fetal material for research. Research involving the fetus during pregnancy may be carried out to benefit the mother, her expected child or both; ethical and legal objections do not arise here. "We understand that suggestions have been made that if it is the intention to terminate the pregnancy with the idea of preventing a live-birth, then it would be permissible to administer substances to the mother in order to see if these are harmful to the fetus. We cannot accept this. In our view it is unethical for a medical practitioner to administer drugs or carry out any procedures on the mother with the deliberate intent of ascertaining the harm that these might do to the fetus, notwithstanding that arrangements may have been made to terminate the pregnancy and even if the mother is willing to give her consent to such an experiment."

Research on the Viable Fetus: " . . . It is both unethical and illegal to carry out any experiments on it which are inconsistent with treatment necessary to promote its life, although in many instances the techniques used to aid a distressed fetus are so new that they are in some degree experimental." It is this group's recommendation that a period of gestation of twenty weeks, corresponding to a weight of approximately 400 to 500 grams, should be regarded at the present time, as prima facie proof of viability.

Research on the Pre-Viable Fetus: The committee unanimously stated that it would be wrong to exclude use of the pre-viable fetus for research, provided the following conditions are observed:

(1) Only fetuses less than 300 grams should be used.

(2) The responsibility for deciding that the fetus is in this category rests with the medical attendants at its birth and never with the intending research worker.

(3) Such research should be carried out only in hospitals and with the direct sanction of the ethical committee of the hospital.

(4) The ethical committee should first satisfy itself: (a) the validity of the research; (b) the information cannot be obtained in any other

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[1] *The Use of Fetuses and Fetal Material for Research. Report of the Advisory Group, Department of Health and Social Security, Scottish Home and Health Department, Welsh Office.*

way; and (c) the investigators have the necessary facilities and skill.

Research on the Dead Fetus: " . . . We are satisfied that the benefits to be derived from the use of the whole dead fetus in the prevention and treatment of disease and deformity are such that it would be retrogressive step to prevent it . . . " provided it is carried out within the context of the general recommendations made in the report whenever fetus, fetal tissues or fetal material are used for research.

Research on Fetal Tissues and Fetal Material Other Than the Fetus: The commercial use of placenta and retroplacental blood has been accepted practice when intended for therapeutic use since 1968. It sees no ethical or legal objection to this practice.

It recommends that wherever fetus, fetal tissue or fetal material are used for research the relevant institution should insure that a record is kept of all such material supplied or received and of its source and destination.

Future Control of Research: It refers to a report published in 1967 by the Committee on the Supervision of the Ethics of Clinical Investigation in institutions set up by the Royal College of Physicians of London. In short, wherever clinical investigations are carried out, the hospital or institution must have a committee on ethics to review and justify such research. It also concluded that "clinical decisions are the responsibility of the clinician, and that ethical questions are for the profession to consider." It also stated that "a system of licensing (for such research) would be unnecessarily cumbersome and a code of ethical practice would be an adequate safeguard as it is in the case of research involving all patients."

Projects Utilizing Human Fetuses, Fetal Tissue and Fetal Material

The work reported has been loosely grouped into physiological and anatomical categories. Items mentioned here include some of those already referred to in the text.

General Fetal Metabolism

1. Fetal head measurements to confirm the accuracy of ultrasonic cephalometry.
2. Fetal size in relation to amniotic fluid production.
3. Fetal size in relation to maternal smoking habits in and before pregnancy.
4. Water exchange between maternal, fetal and amniotic fluid environments.
5. The changes in oxygen partial pressures and acid base balance in hypoxia at various stages of pregnancy.
6. Carbohydrate metabolism in hypoxic fetuses and the effects of maternal dextrose infusions.
7. Glycoprotein synthesis in fetal liver.
8. Study of glucoronide metabolism for future treatment of neonatal jaundice or steroid imbalance.

Endocrinology

1. Detection of hormones that are solely fetal in origin and could possibly be measured in maternal tissues to enable the degree of fetal well-being to be determined.
2. Adrenal steroid metabolism in the fetal gland and the excretion of such steroids into the amniotic fluid at various stages.
3. Investigation of prolactin using fetal pituitary glands.
4. Cholesterol metabolism in relation to plasma protein levels.
5. Insulin secretion in the fetal pancreas and the effects on carbohydrate metabolism.
6. Gonadotrophin assay in fetal pituitary glands and stimulation of fetal pituitary activity in vitro.
7. Fetal intracellular binding site of progesterone with reference to possible blocking of histocompatible antigens.
8. Parathyroid metabolism in early pregnancy.

Haematology

1. Blood volume studies at different maturities.
2. Changes in fetal blood composition and development of plasma proteins.
3. Bone marrow maturation in relation to peripheral fetal blood.
4. Folate metabolism in the fetus and its accumulation in various tissues—notably liver and pancreas.
5. Studies of rhesus incompatibility using fresh suspensions of fetal liver cells.
6. Structure and properties of fetal haemoglobin and its variants.

Cardiology

Fetal electrocardiography performed directly on hysterotomy specimens and correlation with records made whilst the fetus was in utero.

Alimentary Tract

1. Fetal swallowing mechanisms in mid-trimester and the effects of anencephaly.
2. The pharmacology and innervation of small gut of the fetus.
3. The activity of some liver enzymes and their alteration with maturity.

4. Vitamin A content and activity of liver (and brain).

Renal and Urinary Tracts

1. Urine excretion and the production of amniotic fluid.
2. Changes in constitution of fetal urine in relation to renal maturity.
3. Culture of renal tissues to elucidate the development of fetal renal malignancies.

Skin

1. The origin of shedding of skin cells into the liquor.
2. Permeability of fetal skin and its variations with maturity.
3. The growth of fetal oral squamous epithelium in tissue culture.
4. Steroid metabolism in various skin sites of the body.
5. Biochemical assay of glycogen in fetal skin as a means of glycogen storage.

Amniotic Fluid Physiology

1. The circulation of fluid in relation to fetal and placental weight.
2. Composition of fluid in relation to fetal blood.
3. The origin and development of cells in the amniotic fluid.
4. Electrical conductivity of fluid and its effects in fetal electro-cardiographic studies.
5. Secretion of steroid hormones from the vessels of the umbilical cord into the liquor.
6. Alterations in trace metal metabolism in relation to proteins and electrolytes levels in amniotic fluid.

Placental Metabolism

Much work is proceeding in the transfer of various drugs and macromolecules, while other research is investigating glucose, amino-acid and steroid transfers.

Immunology

1. Fetal antibody production in hosts of other species with subcellular fractions from homogenates of the fetal tissues.
2. Carcinoma embryonic antigens present in adult tumors and fetal tissue only. Developments in their use in diagnosis of cancer in the adult and possibly their use for cancer therapy.
3. Fetal thymus cells are used in the investigation of human anti-lymphocyte globulin and other immunosuppressive agents.
4. Research on auto-immune conditions and immunopathological states using fetal tissue.

Chromosome Studies

1. Abnormalities in therapeutic abortions (providing background figures to those produced after spontaneous abortions).
2. Y chromosome detection by fluorescent techniques.
3. Effects of X irradiation on chromosomes in ovarian tissue culture and total numbers of ova.

Anatomy

1. Fetuses are used at all stages of development for teaching of medical and nursing students.
2. Studies of neuro-anatomy using fetal brain tissue.

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Legal Problems of Emergency and Outpatient Care

R. Crawford Morris, Esq.

In our world of rapid change, nothing has changed so dramatically as the Emergency Room which in the last few decades has been through an evolutionary revolution. For example, in 1935 the ratio of bed patients to Emergency Room patients was 10 to 1, whereas in 1965 it was 1 to 4, and it is estimated that by 1980 it will be 1 to 8. In 1935 there were approximately 49,000 emergency admissions into the hospital, whereas in 1965 there were 450,000. Also, in 1965 there were 26-1/2 million bed patients, whereas there were 90 million out-patients in the U.S.A. By 1980, it is expected that this ratio will be 1 bed patient for every 3 out-patients.

Medicine has finally caught up with this revolution. In 1960 the American Hospital Association in its bulletin "The Hospital Emergency Department —An Approach for Examining Emergency Service" said:

"* * * past 10 years * * * dramatically growing number of patients visiting hospital emergency departments * * * . The 'accident room' has become, in a real sense, an 'emergency department'."

In 1962 the AMA's Committee on Trauma of the American College of Surgeon's in a publication entitled "The Emergency Department in the Hospital" said:

"The hospital is being increasingly recognized by the public as a medical care center."

In 1963 a press release in the Cleveland area stated, in part:

"There's a fantastic hospital Emergency Room boom * * * it is revolutionary in scope and implies sweeping changes in the way our health is looked. It involves a significant transfer of doctor's office practice to hospitals."

" * * * people by their actions have determined that Emergency Rooms are to be Community Health Centers where rich and poor can get treatment at any hour and for any complaint.

" * * * in a 5 county area in Ohio Emergency Room visits have been increasing at an average of 1,200 a month since 1935 * * * only about half of the total were for traditional reasons such as shootings, stabbings, traffic and home accidents. The rest were classified as medical cases. They were mostly for reasons not considered to represent emergencies in the past. They were visits with Johnny with a fever, and Grandma whose rheumatism flared up at 11:00 P.M., of Uncle Harry who feared he had heart trouble and Suzy with a stomach ache."

The law seems to be catching on too. In a press release in 1966 quoting a hospital administrator who is a lawyer and a doctor it was stated:

"Emergency Room patients who have to wait more than 15 minutes to see a doctor may be able to prove a *prima facie* case against the hospital or physician."

The American College of Surgeons set this standard:

"Medical staff coverage should be adequate to insure that an applicant for treatment will be seen by a physician within 15 minutes after arrival.

"The Federal Government, the American College of Surgeons and the American Hospital Association has specified in various documents that say every applicant for treatment should be seen by a physician."

To summarize, the new era has arrived in medicine and in law and we all might as well recognize it: the Emergency Room is the Emergency Room no more, it is now the "Hospital Clinic." Perhaps that phrase "Emergency Room" should be stricken from our signs, our vocabulary, and even our thinking. Let us call it "the Mercy Hospital Clinic" or "Out-Patient Medical Clinic," etc. This means that a fully licensed experienced doctor must not only be on duty or "on call" but actually must make the ultimate decisions of all crucial questions involved in each patient's case although he need not actually do the detailed work involved.

It seems to me this is what the American Hospital Association and the American College of Surgeons are saying in their publication "The Emergency Department in the Hospital—A Guide to Organization and Management" where they print in italics, and I quote:

"The conclusion is that *no patient with a complaint serious enough to bring him to the emergency department of the hospital should be denied appropriate examination and disposition by a physician*

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working with adequate facilities and under appropriate supervision.

"Nurses should never be called upon to diagnose, nor should they give treatment except on the orders of a physician."

And, not in italics:

"The standard of care given in the emergency department *must* be maintained at a level *equal* to that provided elsewhere in the hospital and in community."

In short: Since the public insists upon converting the old "Emergency Room" into a new "Medical Clinic," the hospital has no choice but to meet this change by staffing its Emergency Room with full-fledged medical clinic care or else to close its Emergency Room division altogether.

Accordingly, let me give you some rules of thumb for the new concept "the hospital Out-Patient Clinic" which replaces our old "Emergency Room" thinking:

Rule One: Move the fully licensed doctor into the Emergency Room to practice his profession there instead of in his office.

Subrule (a) One of these doctors should be appointed a "Commissar of Emergencies" to separate the true emergency cases from the non-emergency cases or the lesser emergency cases and to determine an order of emergency priority.

Caveat: You find no true definition of "emergency" in either law or medicine. Purely from a lay point of view and by way of relativity, let me suggest the following emergency priority classifications:

CLASS 1—STAT

Example: Myocardial infarct and cardiac arrest. No heart beat available; *or,* the patient is brought in in shock with no blood pressure. In either event, the 4-minute eternity for irreversible brain damage to occur is running.

CLASS 2—10 TO 15 minutes + STAT

Example: Boy with food lodged in esophagus, breathing with difficulty and turning blue.

CLASS 3—1 TO 2 HOURS + STAT

Example: Right lower quadrant pain, fever, rebound tenderness, high white blood count (about to rupture appendicitis).

CLASS 4—ANY TIME THIS AFTERNOON

Example: Stomach ache and low white blood count.

CLASS 5—ANY TIME AT ALL

Example: That old headache back again.

Caveat: To treat Class 1 like Class 4 is to court disaster, and maybe death, and is in itself malpractice.

Comment: Even to treat Class 1 like Class 2 or 3 may mean a living vegetable which can be worse than death, but to treat Class 4 like Class 5 means only an angry patient. While this may be poor public relations and perhaps a violation of the alleged American College of Surgeons "15 minute rule" and therefore perhaps negligence, the likelihood of damages therefrom is remote.

A worthwhile sign in the Emergency Room of one of the greater Cleveland Hospitals reads as follows:

> "Please Remember: This is an Emergency Department where attention is given to the critically ill or injured patient first! It is not a place where people are treated on a first-come first-served basis."

Rule Two: Emergency rooms must adopt as a rule of thumb something like the following: (a) Treat each patient as if he were a private patient who should be admitted unless and until competent experienced doctors rule out all reasons justifying his admission; (b) When in doubt, admit, do not discharge the patient.

Example: 43 year old male worker with good work record and no discoverable record of any prior heart attacks comes to the Emergency Room of a hospital at a time when a "flu" epidemic is prevalent in the neighborhood, complaining of congestion and shortness of breath. He is examined by a resident who tells him he has the "flu" and sends him home with medication and tells him if he isn't better, he should see his family doctor. The patient remonstrates against this and says he has had "flu" before but he never had pain in the chest like this and please could he be admitted. He is not admitted nor is any EKG performed. The patient then has a friend drive him to the family doctor, but the office is closed, it's Wednesday afternoon; and so the patient goes home, lies on the couch and within a few hours has a massive heart attack. He is returned to the same hospital and pronounced dead on arrival. Autopsy shows massive myocardial infarction. (Widow and 4 children. Case settled and dismissed for $30,000.)

Rule Three: Avoid at all cost the language barrier hazard. This means either: (a) Do not employ any foreign residents, interns or doctors who do not speak fluently practical "American" English; or (b) supervise all patients who come into contact with such people. This means the following must not be done by such people (i) taking of histories; and (ii) giving of instructions or orders.

In answer to the question "Do you find any cases against hospitals because of the foreign residents they have?" one of Ohio's leading patients' attorneys (highly successful in medical malpractice cases) said:

"Most of the hospital cases we have seen come because of that. It has been a great source of litigation as you know, that is being improved now. The *Klema* case involved a foreign resident and the *Koubeck* case involved a foreign resident. Most of the problems here are because of a complete inability to communicate. The patient tells the doctor what is wrong. He might as well be talking to the wall.

"The doctor tells the foreign resident what to do and then says, 'Do you understand?'

"The resident will reply, 'Yes," as a matter of politeness, but he doesn't understand and so he does it wrong."

(Craig Spangenberg, *The Preparation and Trial of a Malpractice Case,* pp. 74-75)

Comment: The *Klema* case *(Klema v. St. Elizabeth Hospital of Youngstown* [Sup. Ct., Ohio, 1960] involved an action for wrongful death for the alleged negligence of a foreign resident on the staff of the hospital in adequately anesthetizing a patient for perirectal abscess operation performed under general anesthetic with resultant death of the patient four days post-operation. The claim involved, among other things, inadequate appreciation of the history, perhaps due to the language barrier. (Substantial verdict against the hospital upheld). The *Koubeck* case *(Koubeck v. Fairview Park Hospital* [C.P. Ct., Cuyahoga County, Ohio 1960], involved a patient, who fell ten feet into a bush off a ladder while painting a house and who pulled a small sliver of a branch from a wound in the knee, was taken to the Emergency Room of the hospital where a Mexican intern took a history, examined him, and called in a Chinese resident who took a history and examined the patient, treating the wound and discharging the patient. Later, further symptoms appeared and more of the sliver of the branch was found and removed from the knee wound, which proved to be 6 inches x 1¾ inches x ¾ inches and had been lodged in the knee joint. (Substantial verdict for plaintiff upheld). The patient's attorney tells an amusing story that the patient kept telling him that all through the treatment the foreign resident kept saying to the patient, "Who famdoc * * * Who famdoc?" that it was not until halfway through the trial that it dawned on the lawyer that what the foreign resident was asking was, "Who is your family doctor?"

Rule Four: Where you do render only emergency care in the older temporary sense, make sure the patient (or those responsible for him if there is any doubt of the patient's present ability to comprehend) understands that the care is "stop-gap" only and the absolute necessity of his reporting to another doctor with 24 hours; document this, not only in the Emergency Room record but with written copy to the patient.

Example: Male patient brought into the Emergency Room under the influence of alcohol having been in a fight in a bar. Obvious laceration at the elbow, this is sutured, and the patient is then released with written instructions to see his family doctor within 24 to 48 hours. He goes home, forgets about the paper, states that over the next few days he felt the blood go down to the elbow and stop and go back up again, finally about five days later he goes to another hospital but it is too late, blood clot has formed at the suture site causing ischemia, causing ultimate amputation of the arm 3 ins. above the elbow, a serious injury in a working man. (Settled reasonably due to question of contributory negligence.)

Rule Five: Only a fully qualified experienced staff doctor should order the following types of patients discharged from the Emergency Room.

(a) Suspected head injury with or without intoxication complication—preferably by a neurosurgeon.

Example: I have had several of these cases, well-known alcoholics found at the bottom of the stairs in a bar with a head wound and bleeding, taken to the Emergency Room obviously reeking of alcohol and sometimes incoherent and thrashing about almost uncontrollably. Resident examines the patient, says the patient is drunk, tells the police to take the patient to the "drunk tank," police protest, patient is taken to the "drunk tank," later goes into convulsions, is returned to the hospital, then X-rays of skull are taken and linear fracture of the skull is found and a lawsuit follows. The moral of these cases is that the differential diagnosis between pure alcoholism affecting behavior and a brain injury affecting behavior with perhaps a veneer of alcoholism superimposed on it is a most difficult one and should be made scientifically and with care; namely recording the fact of the patient's behavior and smell of alcohol, and then ruling out all factors such as brain injury with X-rays films, and alcoholism with blood tests, etc. (Had to settle several of these cases.)

(b) Lacerations which may involve tendons and/or nerves—preferably by an orthopedic surgeon or a neurosurgeon.

Example: See "Example" given above. Also, another similar case where there was knife wound in the hand and Emergency Room resident sewed up the wrist and missed a severed tendon which later was found and had to be sewed and caused some limitation. (Had to settle case.)

(c) Symptoms and diagnosis obscure but symptoms are on increase—preferably by an internist.

Example: Here lie the early heart attack cases, and sometimes intestinal obstruction cases, etc. Also case of complaint by male patient of having drunk some "Coke" and felt a lodging in the throat of what he thought was glass. X-rays negative, patient was laryngoscoped, but prior to laryngoscopy was complaining of headaches. Following laryngoscopy, complaining of headaches and some vomiting. Prior history and earlier records of seizures. Patient was released to family, went home, went into convulsions, returned to hospital, operated for brain aneurysm but ultimately died in hospital therefrom.

(d) Chest pains or shortness of breath or other possible heart attack symptoms—preferably by an internist.

Example: In pending heart attack cases, see "Example" under *Rule Two* above of patient who begged to be admitted, who incidentally left a widow and four lovely children.

(e) X-rays taken should be read by qualified roentgenologist carefully—border to border.

Example: Baby brought to Emergency Room, had fallen, with pain in lower right extremity. X-rays taken, placed in shadow box, were read by surgical resident and perhaps by radiology resident as negative. However, clip on shadow box hid a fracture at the top of the film. Patient released, later returned with more serious symptoms more localized. Further films in higher area clearly showed fracture of the femur which by comparison was present in the prior film up near the border. (Had to settle case.)

Rule Six: Preserve evidence:

(a) In suspected poison cases, collect all containers and vomit for laboratory analysis—check Poison Center for antidote before treatment if in doubt.

Example: Retarded child drank from "Coke" bottle containing solution of lye for cleaning. Brought to Emergency Room with the bottle but bottle not examined nor kept. Patient vomited, but vomit is not sent to lab. Patient given emetic and released. Later patient went to another hospital and was found to have severe strictures of esophagus due to the burning by the lye (the emetic is contraindicated in lye cases, doubles the burn), many serious problems and stricture dilations thereafter. Police backed mother's version that she brought the "Coke" bottle to the Emergency Room and gave it to the attendants saying this was what her daughter had taken. (Had to settle during trial.)

(b) In all cases of drug injection or ingestion, obtain and chart a negative history to all allergies especially concerning that type of drug; if positive history, run proper skin tests, etc., first and give medication only where so indicated by test and then only licensed medical doctor should give it.

Example: Patient comes to Emergency Room, is given penicillin, and later has severe reaction thereto. Patient testifies that he carried a card saying he was allergic to penicillin and that he begged the nurse and the doctor not to give him penicillin because of this and showed them the card, but they gave him penicillin anyway. Hospital records silent re allergy history. (Had to settle this case.)

(c) Label all poison drugs or medication conspicuously and place in unusual shaped containers and keep in special place by themselves; don't label "oil of cloves" "clove oil" and don't keep near olive oil or in same type bottle.

Example: Mother thought baby might have gotten into "Draino" at home. Rushes baby to hospital Emergency Room giving this history. Resident orders olive oil lavage. Nurse produces bottle off shelf. Lavage given, then baby vomits and smell of oil of cloves pervades the air, whereupon the bottles are checked. Side by side on the shelf, two round bottles exactly alike, one marked "clove oil" (why not, "oil of cloves"?), the other marked "olive oil." In spite of heroic measures, the baby died. (I was forced to settle the case.)

(d) Keep accurate medical records of each and every visit, not only where examination and treatment is given but also where mere advice or mere referral elsewhere is suggested.

Example: Lawsuit against Hospital A claiming the siblings of a family had chickenpox, that one child was sicker than the others, much worse and was brought to Hospital A and rejected. The child then went to Hospital B where the same thing occurred. Finally, child taken to Hospital C where the patient died on the examining table. Autopsy showed overwhelming septicemia due to Staphylococcus coagulase positive. Neither Hospital A or Hospital B had any records of any such visits to the Emergency Room but a resident in Hospital B remembered the occurrence and the history of having been to Hospital A before coming to Hospital B. (I tried this case and won it—9 jurors out of 12—on defense of proximate cause.)

(e) Where X-raying gonads of patients still within the childbearing years, use extreme care to limit roentgens, especially in female patients who may be in early pregnancy.

Example: A doctor sued a hospital for alleged negligence in failing to shield his wife in X-raying her back following an auto accident, claiming she told them she was pregnant and they said they would shield her, whereas they failed to shield her and seven to eight months later she gave birth to a severely mentally and physically retarded child. Hospital denied any such history was given them or that they knew the wife was in the early stages of pregnancy if such was the fact. Full scale trial involving rebuilding of the X-ray machine eight years later and the retaking of the X-rays with a dosimeter in a phantom women revealing actual roentgens including scatter as 9/10ths of one roentgen as against theorectical calculation of three to four roentgens. Expert testimony by teratologist that at least 350 roentgens would be required to do damage and the damage would then be microcephaly which this child did not have, and further testimony by geneticist that blood drawn from the plaintiff child at age 12 years showed no X-ray damage to her chromosomes. In addition, possible diagnosis of interuterine growth retardation. (Result: Verdict for defendant.)

Do I hear the doctors saying, "We can't run an Emergency Room and do all these things that Mr. Morris wants—give all that care." But precisely, you are no longer running an "Emergency Room." The public has put you out of that business and put you smack into the business of "practicing medicine in the corporate form" whether the law says you can do it or not. Since you must practice medicine, i.e., run a "Medical Clinic" instead of an "Emergency Room," then practice it properly. The law says that when you voluntarily undertake to do a task you need not have done, you must do that task carefully. Having undertaken to practice medicine in the "24-Hour Clinic" form, you will be held to the high standards of furnishing true medical care properly practices by staff doctors aided by residents and interns—so go to it and begin by striking that word "emergency" from your vocabulary—the services you offer are far broader than that today.

Summary

A recent survey of one state in 1971 covering 500 claims over the ten-year period of 1960 through 1970 in an attempt to ascertain where malpractice claims originate revealed the following: In-patient hospital care 54%, physician's office 29%, hospital Emergency Room 14%. My experience in Ohio has been about the same. Therefore, the risk of a malpractice claim arising out of Emergency Room treatment is about one-half that of the doctor's office treatment, and about one-third that of In-patient care. It is not as high as some people think, but it is significantly high enough to warrant careful attention:

Conclusion

To the doctors, I give the following guidelines:

(1) If a doctor should volunteer to play the good Samaritan, he should never accept payment.

(2) Doctor must never negligently cause an emergency to arise.

(3) In all emergencies, in the absence of statute, the doctor must meet the test of the common law of ordinary care in that emergency.

(4) In the new "Hospital Out-Patient Clinic," formerly called the "Emergency Room," the doctor must meet the standard of ordinary care in giving full medical care as if he were treating a private patient in his private office within immediate reach of full hospital facilities.

(5) The ultimate guideline: When the "chips are down," the doctor should practice the best medicine he knows how, do what he thinks is best for the patient and "to hell" with the law, and "to hell" with all the rules I just gave him. I'd rather take the doctor before the jury on that basis, the true good Samaritan basis, than on any other basis.

Example: Ophthalmologist doing eye surgery suddenly encounters cardiac arrest back in the days of open heart massage. He is fearful of slashing open the patient's chest to massage the heart and runs around wasting the precious "4 minute eternity" trying to find a thoracic surgeon, with resultant irreversible brain damage. Verdict and judgment against the ophthalmologist.

Comment:

If the ophthalmologist had been less afraid and opened the chest and massaged the heart, he might have saved the patient even though infection might have developed. It is my opinion that he would have been easier to defend in the latter situation, even if the patient had died or remained a "vegetable."

Example: "T & A" on 5 year old—cardiac arrest. Anesthesiologist who had never done it before slashed open chest and massaged heart and revived boy who finally recovered pretty well. (Verdict for defendant anesthesiologist and for hospital.)

However, if the doctors and hospitals can manage both, namely do what they think is best for the patient and still do what the lawyer would like them to do for medical-legal defense, then the defense trial lawyer will "bless their little hearts" forever.

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Perinatal Morbidity and Mortality Committee

Case History and Commentary

William E. Lattanzi, M.D., Chairman

This is the second in a series of perinatal case presentations and commentary submitted by the Connecticut State Medical Society's Committee to study Perinatal Morbidity and Mortality.

The case material will be actual patients delivered in the State, that are felt by the Committee to represent preventable or probably preventable deaths. The cases selected will be discussed by either members of the Committee or an invited guest.

The purpose of the presentation and commentary will be the dissemination of instructional information to the readers of the Journal.

This month's discussant is Dr. William E. Lattanzi, Chairman of the Department of Pediatrics at the Hospital of St. Raphael, New Haven, Conn.

Case History

A 4 lb. 6 oz. (1988) white female, the second born twin of a G2, P1 white mother, was born at 33 weeks gestation. Twin A was born spontaneously without incident and did well. The pregnancy had been uncomplicated until the onset of premature labor. The Apgar was 8 at one minute, and delivery was by version and extraction. At delivery there were slight grunting respirations, but no other positive physical findings were found except those compatible with prematurity. Head circumference was 30 cm., and body length was 42.5 cm.

Hospital Course

At the time of delivery, the infant was placed in an isolette with oxygen at 34%. She was noted to have had fair color with dusky extremities, grunting respirations, with slight retractions, and a respiratory rate of 32/min.

During the next 18 hours, the nurses noted that the baby was continually grunting with occasional bouts of cyanosis, and the color varied from fair to dusky throughout that time period. However, the baby was active and crying at times. Thick mucus was being suctioned from the baby's mouth periodically.

At 18 hours of age, gavage feeding was started with 10 ccs. of 5% DW, which was taken well. At 22 hours, a mouth full of mucus was removed, after feeding 6 cc. of DW. The infant became quite dusky and oxygen was then given by mask, and the pediatrician was called. At 26 hours of life the baby regurgitated a small amount of yellowish fluid, and became quite dusky once more. Oxygen was again given by mask and feeding was withheld. At 28 hours of life, the doctor was notified of the infant's condition, and he arrived and began resuscitation efforts.

According to the note, the baby had a trachea full of fluid, and an Apgar of about 1½, with a heart rate of 15-20/min., and a rare gasping respiration.

The baby was pronounced dead at 31 hours of age. A chest x-ray taken at 10 hours of age showed diffuse granuloreticular infiltrates, compatible with RDS of infancy. The only other lab work noted was a hemoglobin of 18.8 gm.% and a hematocrit of 57 mm.

Discussion

This premature twin infant represents a common problem in neonatology. She was born at approximately 32 weeks gestation with head size, length, and weight which are consistent with that gestational age. However, no information is given that might confirm the degree of prematurity. In twin pregnancies, however, babies delivered before 35 weeks gestation, tend not to be small-for-date, so that we can accept the degree of prematurity as consistent with gestational age. Because of the early onset of labor, and the twin birth, we have two factors that make this a high risk situation. When this is recognized in any pregnancy, special precautions should be employed to give the infant the best chance for survival. In this instance, the infant was born and despite respiratory difficulties, no laboratory studies were done prior to the X-ray at 10 hours of age. This baby was certainly of a viable weight, and because of the onset of grunting and duskiness shortly after birth, an early X-ray was indicated to exclude other causes of respiratory distress that may have required surgical treatment, e.g. diaphragmatic hernia, pneumothorax. The Apgar at one minute was 8, [illegible] was not repeated at 5 minutes. From the protocol provided, it would seem that the Apgar was falling. This would have been an ominous sign and dictate intervention.

The baby had received 34% oxygen and at times 100% oxygen by mask, to relieve episodes of cyanosis. When this is done, at the present state of our knowledge, blood gases are mandatory. One cannot determine whether or not proper oxygenation had been achieved, or even was possible, since there were no reports of PaO2's. It is unfortunate that her acid-

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DR. WILLIAM E. LATTANZI, Chairman, Connecticut State Medical Society's Committee to Study Perinatal Morbidity and Mortality.

base status had not been determined, since this may have been a great help in planning the course of rational therapy. It is certainly possible in this child, that adequate PaO2 monitoring and correction of acid-base abnormality would have resulted in the survival of a normal infant. One may argue that even with modern neonatal care, the baby may not have survived, and that may well be true. However, the days of benign neglect in treating prematures can no longer be tolerated. Babies in this weight group have had a significant increase in survival rate. This has been due to the measuring of physiological parameters and the correction of abnormalities.

In addition to the lack of adequate surveillance, another feature of this child's management which I believe was improper was the gastric feeding of 10% dextrose in a child who was grunting and dusky. One of the most common causes for premature deaths is aspiration. Babies do very poorly when they are stressed by a lack of oxygen or acidosis, and are fed by gavage. These babies should be placed on an intravenous drip of 10% glucose initially, and blood sugars should be monitored. Once the infant has been relieved of the conditions causing his stress, feedings by gavage may be started. If his pulmonary abnormalities continue, other periferal routes for providing nutritional requirements must be considered.

If we are going to significantly lower the perinatal mortality rate, we must pay attention to high risk situations. A baby who is grunting and is cyanotic, cannot be simply watched with a fervent hope that he will survive. We now have many techniques to employ which give us a scientific background for rational therapy. Recent evidence has demonstrated that small prematures do extremely well from a neurological standpoint, under modern neonatal intensive care methods.

In summary, I feel that this baby should have had the benefit of:

1. A repeated Apgar at 5 minutes.
2. An earlier examination by a pediatrician.
3. An evaluation of her chest by X-ray at a few hours hours of age.
4. Monitoring of her arterial oxygen, pH, PCO2, and blood glucose, and an early attempt at correction of abnormalities.
5. She should not have been fed while in distress by the gastric route.
6. For optimal care, her heart rate and apnea should have been monitored by electronic means.
7. If these conditions were difficult or impractical at her place of birth, she should have been transferred to a hospital with a Newborn Intensive Care Unit.

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The Search for the Chemical Structure of DNA

Jack S. Cohen, Ph.D., and Franklin H. Portugal, Ph.D.

ABSTRACT—The history of the chemistry of DNA has to a large extent been neglected in favor of the physical and genetic aspects. Yet the chemical studies on the nucleic acids spanned a period of more than 80 years, and were crucial to our current understanding of the structure and function of DNA. We have examined the published scientific record and interviewed several participants who made major contributions to the elucidation of the chemical structure of DNA. A partial analysis covering the period 1900-1955 is presented.

This work is principally directed towards those who believe that deoxyribonucleic acid sprang upon the scene in the early 1950's and had no prior history. In fact, DNA was, of course, discovered in 1869 by Friederich Miescher, and a great deal of painstaking work was done in the intervening years. Unfortunately, in the space available I will only be able to present a small portion of the material covering this topic. I will concentrate on the elucidation of the structure of nucleotides, the monomer units from which nucleic acids are built, and the tetranucleotide hypothesis for the structure of DNA, and the evidence against it.

Mononucleotides and the Tetranucleotide Hypothesis

From the turn of the century until the 1940's DNA was generally considered to be a small molecule with a molecular weight of approximately 1,500, consisting of only four nucleotide units and having marginal biological importance. Thus, Walter Jones in the preface of the first book on nucleic acids said in 1914, "The nucleic acids constitute what is possibly the best understood field of Physiological Chemistry."[1] And P. A. Levene in the preface to "Nucleic Acids" in 1931 stated, "The chemistry of nucleic acids can be summed up very briefly. Indeed, a few graphic formulas which need not fill even a single printed page might suffice to express the entire store of our present-day knowledge on the subject."[2] Yet, subsequent work showed DNA to be one of the largest molecules, containing many thousands of nucleotide components, and to be of the utmost genetic significance. These profound changes culminated in 1953 in the proposal by Watson and Crick of a double-helical model for the structure of DNA, which has been described by the eminent geneticist, C. H. Waddington, as "certainly the greatest discovery in biology in this century."[3] It is our intention to describe the progress of this amazing reversal and attempt to analyze the underlying causes for it.

The credit for laying the foundation for the determination of the structure of the nucleic acids, by clarification of the structure of their hydrolysis products, must go chiefly to Phoebus Aaron Theodor Levene.[4] [5] He was born in 1869, the same year that DNA was discovered by Friederich Miescher, and was one of the few Jewish students allowed to enter the Imperial Military Medical Academy in St. Petersburg. As a result of the growing persecution in Russia, his family emigrated to the United States in 1891, and he practiced medicine on the lower East Side of New York City for four years. However, his interest lay in fundamental medical research, and he enrolled as a special student in the Chemistry Department of the School of Mines of Columbia University. Although he never obtained a chemistry degree, he was described by the citation to the Willard Gibbs Medal of the American Chemical Society, which he was awarded in 1931, as the "outstanding American worker in the application of organic chemistry to biological problems."

He received his first appointment to the New York Pathological Institute in 1894 and in 1905 he joined the Rockefeller Institute. In 1909 he and his coworkers made their first important discoveries, the nature of the carbohydrate group in yeast nucleic acid and the order of linkage of the three components, base, sugar and phosphate in a nucleotide.

The ordering of the three chemical components of inosinic acid derived from meat extract had been speculated on by Haiser in 1895[6] when he had shown the presence of phosphorus. By a comparison of the products of mild alkaline and acid hydrolysis of inosinic acids, Levene and Jacobs were able to establish in 1909 the order phosphate-pentose-purine. Alkali gave phosphoric acid and inosine, while acid gave ribose phosphate and the base, hypoxanthine.[7] The term nucleoside was introduced in the same year (1909) by Levene and Jacobs to describe the purine-carbohydrate compounds, such

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as inosine, derived from nucleic acid hydrolysis, and the term nucleotide to describe the phosphate ester of a nucleoside such as inosinic acid.

The human mind likes order. A scientist analyzing data will always search for a relationship to clarify the problem before him. Quantitative relationships between the two purine and two pyrimidine bases which had been found to be present in nucleic acids were reported as far back as 1893 by Kossel and Neumann.[8] Steudel in 1906[9] and Levene and Mandel in 1908[10] concluded that they each occurred in equi-molecular proportions in thymus nucleic acid, and Levene came to the same conclusion in 1909[11] for yeast nucleic acid. This was confirmed by later workers, such as Jones in 1914.[1] At that time such evaluations could be expected to provide no more than crude results. Yet from 1909 until the 1940's it was almost a dogma that the four bases were present in equal proportions in the nucleic acids. This led to the formulation of what has become known as the tetranucleotide hypothesis for the structure of nucleic acids. This term seems to have originated with Kossel and Neumann who believed that each purine and pyrimidine was present in a separate chemical entity in the nucleus. Thus, they stated in 1893, "It is highly probable that four nucleic acids exist of which each contains only one of the nucleic acid bases."[8] Levene appears to have adapted this idea to describe one nucleic acid containing equal quantities of the four bases, although in his published works he never fully committed himself to this—it remained a hypothesis.

It was necessary to ascertain how the mononucleotide units were chemically linked together in the proposed tetranucleotide moiety. In a paper published in 1912 Levene and Jacobs[12] reported products which they identified as thymidine and and cytidine di-phosphoric acids. Levene identified 2-deoxyribose in 1929 as the carbohydrate in thymus nucleic acid (DNA),[13] 20 years after identifying that in yeast nucleic acid (RNA) as ribose.[7] Then in 1935 he and Tipson proved that thymidine has a furanoside (5-membered) ring structure. They could then conclude "Thus it is evident that in deoxyribose nucleic acid the positions of the phosphoric acid radicals are carbon atoms (3) and (5) of the deoxyribose."[14] This was the first time this significant fact was specifically noted.

While Lord Todd and his co-workers are rightly credited with establishing the position of the internucleotide bond in the 1950's, it is not generally realized that Levene had proposed the correct answer in the early 1930's. In view of the fact that Levene was friendly with O. T. Avery, a colleague at the Rockefeller Institute and the discoverer, with Maclyn McCarty and Colin MacLeod, of the role of DNA in biological transformation,[15] the question arises—could Levene have influenced this work? McCarty answered this question thus, "I do not believe that there was any direct relationship between Levene's work on nucleic acids and Avery's interest in the phenomenon of pneumococcal transformation. After Griffith's description of the phenomenon in 1928, his findings were confirmed quite early in Avery's laboratory by Martin Dawson. From the beginning Avery was convinced of the potential biological importance of the phenomenon, and his goal for many years was discovering the chemical nature of the substance responsible for transformation. Work in this direction, though intermittent, began in 1935 after cell-free extracts became available. I believe that there were no preconceived ideas concerning the involvement of nucleic acids. However, by about 1940 it was known that the crude cell-free extracts with transforming activity contained both RNA and DNA as well as other macromolecular constituents. I was told by the late Colin MacLeod that when he and Avery consulted Dr. Levene about the possibility that nucleic acids might be involved in the biological activity, he discouraged them by citing the essential invariability of nucleic acids on the basis of the tetranucleotide theory of their structure. This notion that "nucleic acids are all alike" was repeated to us subsequently by others."[16]

The widely held belief in the fundamental vital nature of the proteins in the life process conspired to bring about this situation. However, the tetranucleotide hypothesis provided Levene with a vehicle for refining the structural knowledge of nucleotides. Other workers in the field provided no more than variations on the same theme. One must conclude that what proved a barrier to further progress in elucidating the structure of DNA was not simply the tetra-nucleotide hypothesis itself, but rather a lack of insight by the workers in this difficult and unfashionable field, coupled with lack of suitable techniques at that time to carefully study the structure of intact DNA rather than its degradation products.

However, to prove the correct structure of a natural product it is necessary that it be chemically synthesized. Emil Fisher first attempted the chemical synthesis of a nucleotide as early as 1914.[17] He used as reagent phosphorylchloride to attach a phosphate group to a nucleoside, a chemical process termed phosphorylation. However, the yields of desired product using this reagent were very low, as a result of many side reactions. The introduction

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.,* the patients—will be.

Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

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of a mild and efficient phosphorylation agent by Alexander Todd and co-workers led to a significant breakthrough in the chemical synthesis of nucleotides for which he was later awarded the Nobel Prize. Alexander Robertus Todd obtained his D.Phil degree in the laboratory of Robert Robinson in Oxford in 1933. He then went to Edinburgh to work with George Barger on vitamin B^1, which led him to work on the related co-enzymes, many of which were found at that time to be pyrophosphates. In 1936 Todd went to the Lister Institute in London where he replaced J. M. Gulland, at that time the most prominent British nucleic acid chemist, who was appointed Head of the Chemistry Department at Nottingham. In 1938, at the age of 30, Todd became Head of the Chemistry Department of Manchester University, where he started several lines of research, on cannibis and related drugs, on purines and nucleosides, and on methods of phosphorylation.

The first full characterization of the reagent dibenzylphosphorochloridate and description of its use as an efficient phosphorylating agent appeared in two short papers submitted in February 1945, and published together in the Journal of the Chemical Society.[18 19] The first of the two was by B. C. Saunders and co-workers, and the second by Todd and co-workers. During the war years, Bernard Saunders in Cambridge had actually been doing secret research on nerve gases.[20] These contain a phosphorus fluorine bond, in place of the phosphorus chlorine bond found in the relatively innocuous phosphorylating agent. Saunders and his co-workers considered it safer to work with the unstable P-Cl compounds than with the highly toxic P-F analogs.

Todd had been appointed Professor of Chemistry and Chairman of the Department at Cambridge in 1944. World War II was still in progress, and the Western allies crossed into Germany in early February that year. With the end of the war in sight apparently February was judged to be a safe time to begin publishing these findings. Thus, the research on the nerve gases had an important, positive, scientific by-product in the understanding of the nucleic acids. Not an unparalleled event in the history of warfare.

Todd's work was predominantly involved with the synthesis of nucleotides and co-enzymes and in his early years in this field he rarely speculated on the structure of the nucleic acids themselves. However, one of the most important later contributions to come from his work was the clarification of the hydrolytic differences between RNA and DNA which had mystified chemists for so long. In 1949 C. E. Carter and W. Cohn described the separation of "yeast" adenylic acid into two forms by ion-exchange chromatography.[21] It was naturally thought that these were the 2′ and 3′-phosphates of adenosine. Levene and Tipson in 1935 appear to have been the first to specifically relate the difference in hydrolytic properties of the two kinds of nucleic acid to their different chemical structures.[22] They suggested that the alkaline lability of RNA, compared to the stability of DNA, resulted from the presence of the 2′-hydroxyl group in the ribose of the former, which could assist in the hydrolysis of RNA. Todd and Daniel M. Brown brought all the evidence together in an influential paper in 1952.[23]

The first successful chemical synthesis of a dinucleotide as found in nucleic acid was finally accomplished in 1955 by Michelson and Todd,[24] and confirmed the chemical structure of DNA which had been proposed.

Todd and Levene, the two who contributed most to the understanding of nucleic acids in half a century of research, met only once, in the elevator at the Rockefeller Institute—a revealing fact about the degree of communication in science at that time. Todd said, "I went to see Herbert Gasser who was then director of the Rockefeller Institute in 1938. We were going out to lunch—my wife, myself and Gasser—and Gasser got into the elevator and this little old man was in the elevator and just said 'Hello,' and Gasser said 'This is Levene,' and he got out, and that was the only time I ever saw him, and I never said anything more to him than 'good morning'."[25]

The Molecular Size of DNA

A major obstacle to the chemical characterization of DNA was the question of its true molecular size. In the 1920's to 1930's it was generally believed that substances which manifested high molecular weights were "colloids;" that is they were thought to consist of aggregates of small molecules held together by partial or ionic bonds. The opposing point of view, argued most ably by J. H. Staudinger was that proteins were truly very large molecules, which were termed "macromolecules" or "polymers," in which the individual components were joined together by actual chemical linkages, or covalent bonds. There were naturally suggestions that, in their native state, the nucleic acids were colloidal aggregates of tetranucleotides.

In 1924 Einar Hammarsten at the Karolinska Institute in Stockholm, Sweden set out to study the colloidal properties of thymus nucleic acid. In doing so he essentially re-discovered the careful biochemical preparation of DNA.[26] Some 50 years earlier Miescher had worked very carefully in primitive cold-rooms making preparations of nucleic acids. But with the advent of interest in the nucleic acids by classical organic chemists such as Kossel and Levene much of the art in the biochemical techniques was ignored. Since these chemists were studying the degradation products it was considered permissible to use harsh conditions during the preparation of DNA. It is not surprising that values obtained for the molecular weight of DNA in the years 1900-1938 were usually low and variable. It was an unfortunate coincidence that they averaged around 1,500, just the value expected for a single tetranucleotide.

In a study bearing on the size of the DNA molecule reported in 1934 Torbjorn Caspersson gave the results of some filtration experiments.[27] Miescher had found in 1871 that nucleic acid was retained by a filter, and others had noted high viscosities for nucleic acid preparations which were early indications of a high molecular weight. Casperson was a student of Hammarsten and used DNA prepared by the method which the latter had described 10 years previously. Caspersson concluded "the astonishing fact that the complexes of nucleic acids must be larger than the protein molecules." Three further studies reported in 1938 applied physical methods to the determination of the actual size of DNA by measuring its molecular weight. Caspersson and Hammarsten supplied DNA to R. Signer in Berne, Switzerland, to measure the molecular weight using flow birefringence.[28] They reported a value of 500,000 to 1 million for the molecular weight of DNA.

A second paper in 1938 indicating a similar molecular weight for DNA was by W. T. Astubry and F. O. Bell using X-ray fiber diffraction,[29] and a third paper, also published in 1938 showing that DNA was a large molecule, was by Levene and Gerhard Schmidt.[30] They used ultracentrifugation, a technique which had been developed by T. Svedberg in the 1920's and had been applied by him and others to show that proteins were true macromolecules with molecular weights on the order of thousands. In the late 1930's an ultracentrifuge was still a rare piece of equipment, even in the U.S.A. E. G. Pickels built an improved model in 1937 at the Rockefeller Institute. Thus in 1938 Levene and Schmidt were able to measure the molecular weight of native DNA at between 200,000 and 1 million by ultracentrifugation, and showed that the results depended on the means of preparation used.

In their study, Levene and Schmidt also observed a non-sedimenting nucleic acid material of low molecular weight, which they concluded, "It is not improbable that it represents a single tetranucleotide."[30] This implied that native DNA was a polymer of tetranucleotides, an idea which was propounded by several authors. Gulland discussed this idea before the Chemical Society of London in 1943, and made a revealing comment, " . . . the conception of a molecule composed of polymerized tetranucleotides has grown from a mental superposition of the later demonstrations of high molecular weights on the older ideas of a simple molecule containing one each of the four appropriate nucleotides; had the true molecular sizes been realized earlier it is doubtful whether the conception would have gained such firm hold as is apparently the case." He then suggested that the ratios of the four bases might be "statistical," but then surprisingly recommended the concept of a polytetranucleotide as a "practical working hypothesis."[31]

Physiochemical Characterization of DNA

In an attempt to clarify several questions Gulland and co-workers studied the titration characteristics of DNA. In an important contribution in 1947[32] they showed that the ratio of primary to secondary phosphoryl groups in carefully prepared DNA samples had a minimum value of approximately 16:1. This is inconsistent with a simple tetranucleotide, although still much too low a ratio to account for the highly polymeric nature of DNA as then known. But, more important in its implications for DNA structure were their findings on the amino and enolic hydroxyl groups of the purines and pyrimidines. These also exhibit characteristic ionization constants. In following the titration of DNA in both acid and alkaline directions, Gulland, *et al.* noted the significant fact that these transitions were not completely reversible. Changes in other properties, such as viscosity, had previously been noted on titration of DNA, and had been explained in terms of a chemical de-polymerization. Gulland *et al.* favored an explanation for this hysteresis in terms of the exposure of amino and hydroxyl groups from the base, which, they concluded, had been hidden in the original structure. This, they attributed to hydrogen bonds—weak bonds between oxygen and nitrogen atoms mediated by hydrogen atoms. They noted that their evidence did not enable them to distinguish whether the hydrogen bonds united different parts of the same chain or different chains of DNA.[33] The presence of hydrogen bonds had been suggested as being important for maintaining protein structures on the basis of similar phenomenon in acid-base titration. Unfortunately, Gulland did not live to follow up the questions posed by these results, nor to achieve the recognition this significant contribution warranted, for he was killed in a train derailment in 1947, the very year of its publication.

The quantitative values for the ratio of amino and hydroxyl groups present in DNA, which were determined by Gulland *et al.*, from titrations, were also not in accord with the exactly equivalent stoichiometry of the bases required by the tetranucleotide hypothesis. It had been accepted for several decades that the four bases were present in nucleic acids in equimolecular proportions. From 1948-1952 Erwin Chargaff, an Austrian emigré working at Columbia University, published a series of papers in which he and his co-workers proved this belief to be unfounded. They described in detail a sensitive and accurate technique for the determination of the purine and pyrimidine components in nucleic acid hydrolysates. Chargaff and Vischer[34] and Rollin Hotchkiss[35] at Rockefeller Institute utilized paper chromatography to separate small amounts of a mixture of purines and pyrimidines into its components, and UV spectroscopy to determine the proportions. They were able to show that the ratios of purines and pyrimidines in DNA from different species varied greatly.[36] Although discrepancies from exact stoichiometry of the four bases had been reported in the literature since its inception, these had been conveniently ignored in favor of the imaginative simplicity of the tetranucleotide hypothesis.

During the course of his work Chargaff noted some other quantitative relationships between the base ratios, which with the accumulation of reliable data and the work of others[37] gradually became compelling. Thus, in 1948 he said "A comparison of the molar proportions reveals certain striking, but perhaps meaningless, regularities."[38] And in 1951, "as the number of examples of such regularity increases, the question will become pertinent whether it is merely accidental or whether it is an expression of certain structural principles that are shared by many deoxypentose nucleic acids despite far-reaching differences in their individual composition and the absence of a recognizable periodicity in their nucleotide sequence."[39] The regularities referred to where the findings that the amount of adenine equalled the amount of thymine, and guanine that of cytosine. Later Chargaff stated, "It will surprise many readers . . . to learn that the first announcement of base-pairing was made in 1950."[40] There is, of course, a major distinction between unitary base ratios of unknown origin and specific base-pairing as advanced later by Watson and Crick.[41] Further, according to James Watson's personal account after he had 'discovered' specific hydrogen-bonded purine-pyrimidine base-pairing, "Chargaff's rules then suddenly stood out as a consequence of a double-helical structure for DNA."[42] Nevertheless, the quantitative studies of Chargaff and his co-workers represented the last nails being driven into the coffin of the tetranucleotide hypothesis for the structure of the nucleic acids.

As a result of these studies over a period of more than 50 years, DNA was known to be a high molecular weight polymer with phosphate groups linking deoxyribonucleosides between the 3′ and 5′ positions of the sugar groups. The sequence of bases was unknown, although some quantitative regularities in base composition had been noted. While the detailed chemical structure of DNA had been determined, its molecular geometry remained a mystery. In the elucidation of this mystery molecular biology was, of course, to become the operative phrase.

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Woman and Her Womb

Ruth W. Lidz, M.D.

In 1870, Professor Hubbard of New Haven, addressing a Medical Society Meeting, explained to his colleagues that it seemed "as if the Almighty, in creating the female sex, had taken the uterus and built up a woman around it."* Many women would still agree in their innermost feelings with this view. However, in recent years attitudes toward woman's physiology and health as well as woman's role in society have changed a great deal as the result of new knowledge of physiology, endocrinology and pathology and in connection with the woman's liberation movement.

In the 19th century, the uterus was seen not only as essential to woman kind but also as a highly perilous possession. Woman was considered to be subject to twice the sicknesses that affected men, just because she had a womb. Her uterus exercised "paramount power" over her physical and moral system, and its sway was considered "no less whimsical than potent." The irregularities of the womb's workings were considered to produce headaches, nervousness and feebleness as well as indigestion, constipation and insomnia, so that Byford, Professor of Gynecology at the University of Chicago in the 1860s, was moved to exclaim in his monograph on the uterus "It is almost a pity that a woman has a womb!"**

In recent years, the gynecologist, armed with new knowledge of physiology, endocrinology and surgery, has learned largely to control the functioning of women's organs. He has developed a rational attitude toward the woman's reproductive system and has come to see the uterus of a woman who wishes no more children as a "useless, bleeding, symptom-producing, potentially cancer-bearing organ."† This attitude, of course, can be very threatening to a woman who considers her uterus part of herself and not useless, even if she does not plan to have more children. Women differ greatly in their attitudes toward the uterus, even if they are well informed about its functions. With hysterectomy, a woman has to face the loss of a part of her body, and the meaning her uterus has for her makes a great deal of difference in the promptness of her recovery and her general well-being. As is well known many women take as long as six months to regain their strength and energy after hysterectomy and the number of women who develop major depressions after it is high.

In addition to the strong positive feelings she may have about her uterus, the woman may be afraid of the gynecologist-surgeon and feel unable to ask for explanations, let alone challenge his decision to remove her useless organ. The resentment she may then feel adds to her suffering which undermines the process of recovery from the operation. It is therefore particularly important for the gynecologist to be familiar with some of the common meanings that the uterus and its function have to women of different backgrounds and for him to respect such attitudes, even if they are not particularly "rational."

In my work as a psychiatrist with women on contraception, with women applying for abortion because of contraceptive failure, and with women before sterilization and before and after hysterectomy, I became interested in studying the meanings the uterus can have to a woman. These meanings can be classified as: 1) Reproductive; 2) Menstrual; 3) Sexual; 4) Strengthening.

Women may have positive or negative feelings about their uterus but these feelings always have connections to the woman's attitudes about herself and her functioning and to her self-esteem. They can affect her sexual experience, particularly when her husband shares her feelings or puts pressure on her because of his feelings.

1) Reproductive:

The reproductive meaning is, of course, the most obvious and rational. The value of the uterus as "the organ that produces" may change over the years and the general assumption is that a woman, once she has had several children or reaches the age of 38 or 40, no longer values the organ and should be glad to get rid of it and be freed thereby of the chance of pregnancy as well as the danger of cancer. However, among women who have had several children, even more than they wished, there are always some for whom babies are the essence of life—whose creative feeling is totally bound up with pregnancy and giving birth. They have no other interests and the loss of the uterus means to them the "change of life," "old age" and being useless. Such women feel "gutted" by a hysterectomy, become depressed, and

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*Quoted in M.L. Holbrook: *Parturition without pain: a code of directions for escaping from the primal curse.* New York, 1895) 15.

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expect to "shrivel like a prune." The essence of their feminine life is lost.

One woman told me that what helped her through the operation was her gynecologist's understanding remark when he said: "How sad that your uterus, that has done such a fine job, has to come out now."

On the other hand, the woman who always fears that her uterus may be "eaten up" by cancer and even expects it to be, who may have actually made little use of her uterus reproductively, often does well after hysterectomy. Her anxiety is relieved and her energy freed for something constructive. If, however, the cancer fear is a delusional conviction as is seen in some middle-age depressions, the situation is more complicated and a hysterectomy should probably not be done without consultation with a psychiatrist. If a woman has had previous depressive reactions to losses in her life, this may also be a contraindication against an elective hysterectomy. On the other hand, if a woman has strong intellectual or creative interests, these may help her to start a new life and overcome any regrets about her loss promptly.

2) Menstrual:

Menstruation is popularly considered to be a nuisance in our culture, and gynecologists have accepted the general attitude that the monthly period is "the curse." In some other cultures, however, menstrual blood is considered a powerful liquid that can be used as a love potion or as a deadly poison. In both instances menstrual blood symbolizes the power of women. There are many women, perhaps those best attuned to their female physiology, who value menstruation and regulate their lives by this monthly function as by a clock. Some regard it as an indicator of their health, and even believe that their health is being protected by the monthly flushing out of "all useless and bad things." They watch their menstrual blood with care, interest or fascination and can become quite upset when changes occur, as may happen with oral contraceptives. They consider the uterus the center of their femininity and its function a sensitive indication of their health. Its loss amounts to a severe shock. One woman told me she felt a "need for re-orientation,"—her feminine "clock" was gone. She became depressed, felt "disoriented in life" and in "ill health," though her doctor told her she was doing fine.

3) Sexual:

Many women (and men) still consider that the sexual act should be carried out primarily for procreation, or at least they wish to be able to phantasy they are producing a baby and need to feel fertile in order to enjoy sex. Some women consider that whereas a man gains sexual pleasure from intercourse, a woman "gets" a baby. Women with such feelings and attitudes expect that a hysterectomy will shut the door on their sex lives, for "intact sex organs" are necessary for them to have sexual feelings. Even when using oral contraceptives or an IUD, such women lose interest in sexual relations, as they feel that there is "no purpose" to them. They can become more and more depressed and if they refuse to have intercourse so as not to feel frustrated, marital troubles may ensue. Of course, if the husband feels that a woman who is not fertile cannot interest him, the woman's depression is apt to increase. On the other hand, if a woman, because of her fear of pregnancy, has felt constrained from getting involved or from "letting herself go" sexually, she may have greater sexual pleasure after sterilization or hysterectomy.

Masters and Johnson have shown in their experiments that the uterus is involved in a woman's orgasm. Whether or not a woman would, or could, detect a change or "miss" her uterus during intercourse after hysterectomy, is, I believe, not known at present.

4) Strengthening:

The uterus is often considered the organ of woman's "potency." It is the organ that allows her to do her woman's job of having a child. It becomes the symbol for her power and creativity. To any woman, then, a hysterectomy, regardless of how necessary it may be, can be a major attack on the center of her person, robbing her of the meaning of her life and her "strength." Men, too, often express their feeling by saying: "She is no good anymore."

One woman seen in consultation several weeks after hysterectomy complained that she felt "neuterized," even though she had been told that only one of her ovaries had been removed. Her feeling of weakness continued for several months. She preferred to spend much time in bed and appeared unable to accept her household duties.

If both ovaries are removed because the woman is near menopause, it can still be very difficult to balance the hormone levels to the woman's satisfaction. The lab reports may be fine but the woman will complain of depression, poor sleep, drenching sweats, or sore and swollen breasts.

In cases where a woman has cancer, obviously the operation must be done and there will not be time to consider the woman's feelings carefully, but talking with her about her feelings can still be very helpful. If the operation is elective, the woman needs to be given time to consider her feelings and she should be given the opportunity and right to make the final decision about the operation. Herein will be found the best insurance for a good and speedy recovery.

Family Medicine Programs in Medical Schools

Report of the Council on Medical Education of the AMA to the House of Delegates, Annual Meeting, June 1974.

In September 1966, the Council on Medical Education's Ad Hoc Committee on Education for Family Practice chaired by William R. Willard, M.D., published its report "Meeting the Challenge of Family Practice." This report (hereafter referred to as the Willard Report) was directed toward an examination of the problems and issues involved in preparing physicians for Family Practice. The Committee predicted that a successful national effort might require a decade or more before its full impact on the medical care of the nation would be felt.[1]

Now, seven years later, the Council on Medical Education has deemed it appropriate to assess the progress being made in the preparation of physicians for Family Practice. Since the majority of Family Medicine programs are less than four years old, it is too early to attempt any overall evaluation of them. It is possible, however, to describe the beginning development of these programs and to indicate some of their characteristics. This paper reports the results of an investigation of medical student education in the field of Family Medicine. It has been the authors' intent from the beginning to assess the progress medical schools are making toward fulfilling the first recommendation of the Willard Report:

> "Major efforts should be instituted promptly to encourage the development of new programs for the education of large numbers of family physicians for the future, as described in the body of this report."[2]

At this point, it should be emphasized that this report is concerned only with programs clearly identified as FAMILY MEDICINE, i.e., those which will ultimately lead the student to certification by The American Board of Family Practice. The authors recognize that other routes to the attainment of comprehensive, family-oriented skills exist and may become increasingly important. Thus, programs which emphasize Family Medicine with the expectation that the student will eventually be certified in Internal Medicine or Pediatrics, and programs which emphasize a community approach to Family Medicine (Community Medicine programs) are not included in this study.

In the past, many physicians started out in General Practice and later became traditional specialists by limiting their practice to a particular field. More recently, medical school graduates have been entering specialty practice directly, i.e., through training in residencies undertaken immediately after internship. Many physicians in both the earlier group of general practitioners and the more recent group of specialists have carried on Family Practice. The Willard Report called attention to the fact that virtually no physicians were being trained specifically for careers in Family Practice. The report recommended that there be a specialty in Family Practice and that physicians in this specialty be educated to provide comprehensive, personal health care.[3]

The family physician is defined as one who provides the patient a means of entry into the health care system, evaluates the patient's total health needs, and accepts responsibility for the management of comprehensive and continuous health care for the patient within the context of his environment, including the community and the family.[4] The Willard Report recommended that medical schools provide for the education of physicians who would be competent to provide such comprehensive and continuing health care.[5]

The Committee called attention to the need to develop medical student interest in Family Practice. It is necessary that medical students have the kind of clinical teaching that provides an opportunity for the student to follow the course of chronic illness and to become familiar with long-term health problems of patients, rather than be limited only to patients hospitalized for acute illnesses.[6] According to the Willard Report, the principal objective of the Family Practice program should be to prepare the physician to carry out his function as "the coordinator of the health care team" who provides access to the health system and assumes responsibility for the management of his patients over a long period of time. Specifically, a Family Medicine program should provide a "model" of Family Practice which demonstrates to the student the philosophy of Family Practice and an understanding of the role of the family physician. It should help the student acquire the skills necessary for diagnosis, treatment, and management of patients. It should also provide the student with the opportunity to acquire knowledge in appropriate depth in various fields of medicine encompassed by Family Medicine.[7]

The Family Medicine program should have an adequate number of both full-time and part-time faculty who are academically qualified and highly competent in Family Practice. The faculty of the Family Medicine program should have the same degree of control over this service that other clinical disciplines and services have in other areas of the medical school and teaching hospital. The Family Medicine faculty should also have the same recognition in terms of rank and prerogatives as those afforded the faculty in other clinical areas.[8]

Initially there may be a scarcity of competent faculty for Family Medicine programs. The solution to the problem of recruiting faculty will be to interest well-trained clinicians from such fields as Internal Medicine, Pediatrics, General Practice, and others. Faculty members who are recruited from other specialties must be provided the opportunity to increase their competence in academic Family Medicine. In addition to acquiring the values and philosophies of Family Medicine, they will need to learn how to function in an academic setting, to teach effectively, and to conduct research relevant for Family Medicine. The Family Medicine faculty will need additional time beyond what is required for specialty certification in Family Medicine to acquire the pedagogical competence, judgment, skill, and experience appropriate for future academic leadership in the Family Medicine field.[9]

There should be a discrete geographic unit within the medical center hospital if that is the pattern for other services. In some institutions, however, it may be desirable to establish a separate physical plant to house the Family Practice staff in an area of easy access for the patients.[10] The medical student, usually during the third or fourth year of medical school, should have the opportunity for a preceptorship or clerkship in Family Practice. If this experience gives the student a satisfying opportunity to observe and assist the preceptor, it can have recruitment value for the specialty of Family Practice.[11]

The principal recommendations of the Willard Report are listed below:

1. Major efforts should be instituted to encourage the development of new programs for the education of large numbers of family physicians.
2. Family Practice Models should be developed in the medical school or teaching hospital.
3. New sources of financial assistance for the support of Family Practice teaching programs should be developed.
4. Special attention should be given to factors which make a favorable environment for Family Practice. Such an environment serves as an incentive to medical students and young physicians to enter this field.[12]

The Survey

In order to identify the schools with a department or division of Family Medicine, the AAMC Directory for 1972-73 was consulted. In many cases, the school's bulletin supplemented the Directory information. For a few schools, the most recent pre-survey material indicated a new program that was developing. Family Medicine Programs in other schools were ascertained from response to a four-part question on the AMA-AAMC Liaison Questionnaire for 1973. An attempt was made to identify the specific individual responsible for the program in each school. The American Academy of Family Physicians was very helpful in providing the names of persons to whom the questionnaires should be addressed.[13]

A letter, which explained the purpose of the survey, was sent with the six-page questionnaire to the person identified as the one most knowledgeable about the teaching of Family Medicine in each school for which some type of program in Family Medicine had been tentatively identified.

Findings

Forty-nine schools have in operation an undergraduate program in Family Medicine. (See Table I.) The majority of these programs have been established within the past three years. (See Table II.) Eleven medical schools (four of these are developing schools) indicated that they have substantial plans for a Family Medicine program at the undergraduate level. At this time, thirty-nine schools have no significant teaching program in Family Medicine for undergraduate medical students.

Table I

NUMBER OF SCHOOLS WITH FAMILY MEDICINE PROGRAMS

Operating Program	49
Developing Program	11
Graduate Program Only	3
Elective Clerkship/Preceptorship Only	10
No Family Medicine Program	28
No Response	9
TOTAL Four-Year Medical Schools	110

Over sixty-five percent of Family Medicine programs have been established within the past three years. It is worth noting that the newer programs (less than four years old) tend to be established as academic departments rather than as divisions of another department. (See Table II.)

Table II

AGE OF FAMILY MEDICINE PROGRAMS

Years:	*Dept.*	*Div.*	*Other*	*Total*
One	7	0	1	8
Two	7	4	2	13
Three	6	5	0	11
Four or more	5	10	2	17
	25	19	5	49

There seems to be little relationship between state requirements and the development of a Family Medicine Program. Of the forty-nine schools with a Family Medicine program, only twelve are required by state law or regulation to have such a program and/or an administrative unit of Family Medicine. Two of the schools which are developing a program are required to do so by the state. More important has been the availability of Federal and State grants to support training in Family Practice.

A Family Medicine program which enjoys the support of the medical school and its faculty will demonstrate a degree of "status" which will enable it to compete with other clinical departments for faculty, teaching time, space, and student attention. Thus, a program with full-time faculty organized as a clinical department or an independent division, will probably have greater strength than a division within another department or a "program" operated as a part-time activity of a member of the Dean's staff. Of the forty-nine schools with a Family Medicine program, twenty-five programs are departments and two programs are operated as autonomous divisions. Nineteen programs are operated as divisions within another department. Three free-standing programs are working toward department status.

In most schools, paid full-time faculty can compete more effectively than can part-time or volunteer faculty within executive, curriculum, and space committees for teaching time, money, and physical space. That most of the programs have at least one or two full-time faculty members is shown in Table III. Thirty-five of the 49 programs have three or more full-time faculty; eighteen programs have six or more full-time faculty members. Numerous unsolicited responses indicated that active recruitment was underway. Departments seem more likely to have a larger number of full-time faculty than do divisions or autonomous programs.

Table III

NUMBER OF FULL-TIME FAMILY MEDICINE FACULTY

Number Faculty Full-Time	*Dept.*	*Div.*	*Other*	*Total*
Six or more	11	7	0	18
Three to Five	10	6	1	17
One or Two	4	5	3	12
No Full-Time	0	1	1	2
Total Programs	25	19	5	49

It is important for the medical students to have visible evidence that the teachers of Family Medicine are occupied in doing things which are socially desirable, are related to clinical problems, and which have prestige among other, more established clinical departments. In a system where many of the student's clinical activities are elective, it is also important that the students have early exposure to teachers of Family Medicine in order that they may acquire experiences on which to base the selection of electives during their clinical years.

In the majority of the Family Medicine programs (44) the faculty is an integral part of undergraduate teaching in the medical school. They are involved in the teaching of such interdisciplinary courses as "Introduction to Clinical Medicine" and "Physical Diagnosis."

When the medical student can observe the Family Medicine faculty admitting patients from the Family Practice clinical unit to the major teaching hospital and retaining primary responsibility for the care of those patients, an important tenet of Family Medicine is demonstrated for the student. From Table IV it is clear that the faculty of most department Family Medicine programs admits patients to the major teaching hospital and retains primary responsibility for those patients. The faculty of the majority of non-department programs also retains responsibility for the patients they admit to the teaching hospitals, but they are less likely to admit to the major teaching hospital.

Table IV

PATIENT RESPONSIBILITY OF FAMILY MEDICINE FACULTY

Family Medicine Faculty Usually:	*Department Programs*	*Non-Department Programs*
Admit to major hospital,* retain control of patient.	17	10
Admit to affiliated hospital,* retain control of patient.	5	11
Admit to major hospital,* relinquish control of patient.	2	1
Admit to affiliated hospital,* relinquish control of patient.	1	0
Do not admit patients to either major or affiliated hospital.*	0	2
Total Programs	25	24

**Refers to medical school teaching hospitals.*

To have visibility, the medical student program needs to be a clinical program conducted in the environment of other established clinical programs. An essential element seems to be the combination of a residency training program and medical student clerkship experience in a Family Practice "model" located in, or closely associated with, a major teaching hospital. Thirty-eight of the Family Medicine units are located on the campus of the medical school. Another three programs are located near the campus, i.e., within a block or two of the medical school or teaching hospital. Eight Family Medicine programs are located a mile or more away from the campus of the medical school. (See Table V.)

Table V
LOCATION OF FAMILY MEDICINE UNIT

On Campus	38
Near Campus	3
Far From Campus	8
Total Programs	49

All of the forty-nine schools with a Family Medicine program offer clerkships in Family Medicine, the majority of which are elective. In almost all schools, the number of students participating in these clerkships has been increasing since 1971. Only two schools indicated a decrease in the number of students participating in these experiences. Thirty-seven schools have in operation a "model" Family Practice unit. In nine additional schools the "model" is planned or actually in construction. While the "model" was usually developed for residency training, most of the schools also use it for medical student clinical training.

In the medical school operated programs, the number of Family Practice residents has been steadily increasing over the past three years. In January 1971 the total number of Family Practice residents on duty in residency programs of these schools was 116. The number of Family Practice residents projected for 1973-74 in programs associated with these schools was 798. (See Table VI.) Only one school indicated that their number of Family Practice residents is decreasing. Since over sixty-five percent of the existing Family Medicine programs are less than four years old, it is too early to determine what effect these programs have on the number of graduating students who choose a Family Practice residency.

There is some evidence that the residency programs in schools with a substantial Family Medicine program at the undergraduate level are quite successful in attracting medical school graduates to fill Family Practice residency positions. In these medical schools the total number of first year Family Practice positions offered for July 1973 by Family Practice residency programs was 387. Over three-fourths (seventy-six percent) of these positions were filled through the matching program by April 1973. Seventeen of these Family Practice Residency programs have filled all their positions; eleven more have filled over half of their positions.

One important indication of a medical school's commitment to a new program is its willingness to invest university funds. Of the twenty-five programs with department status, all but one are financially supported, at least in part, from general university funds. This was not found to be true for those programs which are divisions within a department. Only eleven of the nineteen divisions of Family Medicine received any financial support from general university funds. The division level programs were more likely to be dependent on federal and/or state funds, gifts from private foundations, and earned income. Most programs, however, received financial support from a variety of sources.

It is obvious that the number of Family Practice programs is increasing in medical schools. It seems equally obvious that the number of students interested in these programs is also increasing. This report is intended, in large part, to provide a basis on which subsequent development can be evaluated. In addition to the various items above which need to be followed-up, much additional information is needed on (1) academic and social characteristics of students electing careers in Family Medicine; (2) ultimate career choices of students initially electing Family Medicine; (3) the academic and professional characteristics of Family Medicine teachers as compared with other faculty members; and (4) present and evolving financial support of medical school programs.

Attractiveness of a professional field to medical school graduates is, of course, only a part of the story of the development of a new medical specialty. The adequacy of programs in filling public needs is of paramount importance, of course. Only with continued observation and experience will it be possible

Table VI
YEARLY TRENDS IN FAMILY PRACTICE RESIDENCY PROGRAMS

		Schools with Undergraduate Programs in Family Medicine	
Academic Year	*No. Positions Filled All F.P. Residencies*	*No. Schools with F.P. Residency*	*No. Residents in F.P. Residencies*
1970-71	265	18	116
1971-72	632	26	264
1972-73	1,041	33	471
1973-74	1,771	43	798*

*Expected

to say whether or not the Family Medicine programs are filling both public and professional needs satisfactorily.

Summary

A composite of several of the more successful programs would have most of the following characteristics.

A Family Medicine program which enjoys the support of the medical school and its faculty will demonstrate a degree of status which will make it competitive with other clinical departments. Thus, it will have a substantial full-time faculty organized as a clinical department or an independent division, rather than as a division within another department or a program operated as a part-time activity of a member of the Dean's office. The faculty of such a Family Medicine program will be involved in the teaching of interdisciplinary courses with the faculty of other clinical departments, as well as teaching in their own specialty.

The more successful programs will have high visibility, with the Family Practice "model" or clinical teaching unit located either on the campus (i.e., medical school or primary teaching hospital) or nearby. The medical student clerkship experience will be associated with a Family Practice residency training program located, at least in part, in a major teaching hospital. The Family Medicine faculty will admit patients from the Family Practice model to a major teaching hospital and will usually retain primary responsibility for those patients. The medical student's clinical experience may be supplemented by additional experience in more remote clinics and in affiliated or community hospitals.

The Family Medicine clinical program conducted in the environment of other established clinical programs rather than isolated from them will be effective in eliciting student interest and in attracting candidates into its residency program.

Another characteristic of the well established Family Medicine program is that it has the commitment of the medical school for financial support, with at least some support from general university funds. A stable program will not be entirely dependent upon either earned income or grants, whether federal, state, or foundation.

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2. *Willard Report,* p. 49.
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5. *Ibid.,* p. 15.
6. *Ibid.,* p. 19.
7. *Ibid.,* pp. 22-23.
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9. *Ibid.,* p. 40.
10. *Ibid.,* pp. 29-33.
11. *Ibid.,* pp. 33-35.
12. *Ibid.,* pp. 49-50.
13. The authors wish to express appreciation for the generous assistance of Robert Graham, M.D., Field Secretary, Commission on Education, AAFP; and of Thomas Johnson, M.D., former Director of the Division of Education, AAFP.

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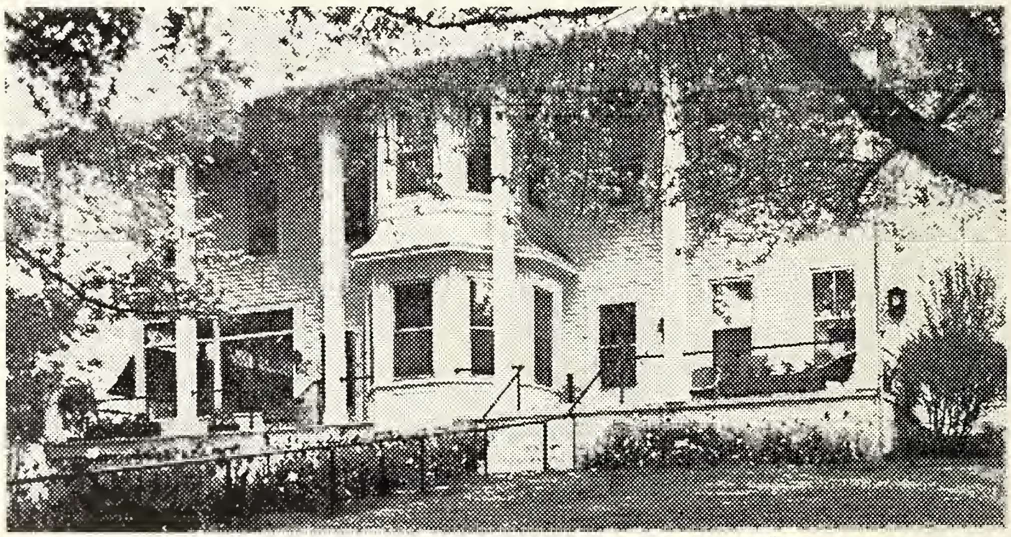

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Control of Infections from Intravenous Infusions

About one third of patients hospitalized in the U.S. receive intravenous infusions, a proportion that has steadily risen, mainly because of improvements in plastic catheters and increased reliance on intravenous medications in the treatment of critically ill patients. Unfortunately, increased use of intravenous fluids and equipment has been associated with an increased risk of septicemia and thrombophlebitis.

Cannula

When IV administration is indicated, a scalp vein needle or a small vein needle is preferred to a plastic catheter. Scalp vein needles are associated with a lower rate of septicemia and phlebitis than plastic catheters (G. Peter et al., J. Pediatr., 80:78, 1972; K. Crossley and J. M. Matsen, JAMA, 220:985, 1972). Although the risk of sepsis is much lower with scalp vein needles, some cases have been reported with prolonged use (R. L. Harbin and W. Schaffner, South. Med. J., 66:638, 1973). Because scalp vein needles do not stay in place as securely as plastic catheters, they must be replaced frequently; this may explain both the lower incidence of complications and the reluctance of many physicians to use them.

Plastic catheters are often used in seriously ill patients requiring long-term administration of intravenous fluids. Recently, siliconized catheters have become popular because they are softer, more flexible, and allegedly less thrombogenic than those made of polyethylene. Some comparative studies have failed, however, to confirm the clinical advantages of silicon; further investigation is obviously needed.

IV Fluids and Bottles

The importance of contaminated IV fluids as a cause of septicemia was not recognized until recently. In the past few years several outbreaks of septicemia associated with intravenous fluids have emphasized the possibility of fluid contamination during manufacture. Contamination with even a few organisms is extremely dangerous since some fungi and bacteria can proliferate at room temperature in a variety of IV solutions to more than 10^5 organisms per ml within 24 hours.

Since IV bottles may also be a source of infection, they should be inspected for cracks or turbidity of the fluid before use and plastic containers should be squeezed gently to reveal punctures. Once opened, fluids should be used within 24 hours.

Location of IV Site

The arm is the preferred site for routine short-term IV therapy in adults. Catheterization of veins in the legs appears to be associated with a considerably greater risk of thrombophlebitis and sepsis. Some consultants recommend that large veins should be used for intravenous administration of fluids, so that the catheter does not completely occlude the vessel, which is more likely to cause thrombosis.

Preparation of IV Site

Although catheters may be seeded by contaminated IV fluid or by a transient bacteremia or fungemia, a substantial portion of catheter colonization and catheter-associated bacteremia is caused by organisms commonly found on the skin of hospitalized patients or on the hands of personnel. Strict aseptic technique should therefore be used in the insertion and maintenance of catheters. The catheter site should be cleaned with an antiseptic; alcoholic iodine solutions (tincture of iodine) are most effective but may irritate the skin of some patients. Aqueous iodine solutions such as povidone-iodine (Betadine) are much less likely to irritate and are almost as effective as alcoholic solutions.

Maintaining the IV

The catheter should be firmly anchored to prevent to-and-fro motion, and then covered with a sterile dressing. The IV site should be inspected at least once daily, and if inflammation or phlebitis is detected, the catheter must be removed promptly. Malfunctioning or occluded catheters should not be manipulated or irrigated but should be removed, since they are frequently already colonized and represent a potential focus of septicemia. The tubing used for intravenous administration of fluids should not be used for drawing of blood samples, central venous pressure measurements, or administration of blood products. Since skin bacteria may be the source of catheter-associated infection, topical antibiotic preparations have been widely used in catheter care, but the value of topical antibiotic drugs in preventing infection has not been clearly established.

IV—Associated Infection

Incidence—When catheters were removed and cultured, positive cultures were reported in as many as 78 per cent. Bacteremia has been reported in two to five per cent of patients with IV catheters; some centers using trained intravenous nursing teams report fewer infections. In almost all studies, rates of catheter colonization and bacteremia increased dramatically when catheters were left in place for more than 48 hours. In general, it is prudent to remove catheters no more than 48 hours after placement, except for such special indications as total parenteral nutrition.

Diagnosis

The IV system should always be considered in the differential diagnosis of sepsis, even in the absence of signs of phlebitis. In addition to culturing the IV site and other possible sources of infection, at least two blood cultures should be obtained from separate venipunctures. The catheter should be removed gently and the tip cultured, but since it can become contaminated during removal, recovery of organisms from the catheter alone does not prove that the IV apparatus is the source of infection. Residual samples of fluids or medications received by the patient in the preceding 24 hours should also be cultured.

Treatment

Removal of the IV system is the most important step in treatment of IV-associated bacteremia, often resulting in dramatic clinical improvement. Parenteral antibiotic therapy should be administered to seriously ill patients, but often can be stopped two or three days after the catheter has been removed. Such therapy should include antibiotics effective against penicillin-resistant staphylococci and multiple-drug resistant gram-negative rods, such as oxacillin and gentamicin. Treatment with antifungal agents should not be started unless there is evidence of systemic fungal infection, such as a positive blood culture in a patient with a predisposing disease who is clinically deteriorating.

Central Venous Catheters

Central venous catheters are indicated for such special diagnostic and therapeutic purposes as central venous pressure monitoring and total parenteral nutrition. Catheterization of the basilic or cephalic vein in the antecubital fossa has been the traditional approach to the central venous system. Catheters may, however, be difficult to insert in these veins and are associated with a high incidence of phlebitis; many physicians prefer direct percutaneous catheterization of the internal jugular or subclavian vein. Regardless of the vein chosen, the risk of infection is high, especially when catheters are used for total parenteral nutrition; this should be undertaken only in hospital units that are specially staffed and equipped for such procedures (R. W. Bernard et al., Ann. Surg., 173:191, 1971; D. A. Goldmann and D. G. Maki, JAMA, 223:1360, 1973.

Conclusion

Patients receiving continuous IV therapy are exposed to a risk of infection. Scalp vein needles are less likely to cause septicemia and thrombophlebitis than intravenous catheters. When catheters are used, they should be inserted with sterile technique and generally should be removed after a maximum of 48 hours' use. Contamination of intravenous fluids or apparatus should always be considered as a possible cause of sepsis.

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CALL
SEMI-ANNUAL MEETING OF THE HOUSE OF DELEGATES

The 1974 Semi-Annual Meeting of the House of Delegates will be held at the University of Connecticut, Storrs, Connecticut, commencing at 10:00 o'clock in the morning of Wednesday, November 20.

James H. Root, Jr., President
Kenneth F. Brandon, Speaker of the House
Louis C. Backhus, Secretary

INTRODUCTION OF RESOLUTIONS

Article V, Section 12, Par. 3 of the Bylaws of the Society Provides that:

All resolutions to be considered as regular business at any regular meeting of the House of Delegates must be in the hands of the Speaker not later than seventy-two hours before the opening of that meeting. All resolutions and recommendations published in the official agenda distributed to the members of the House prior to the meeting at which action is to be taken shall be considered as regular business. Resolutions presented later than seventy-two hours before the opening of a meeting will be referred for consideration as regular business by the House only when they are presented by the Council or accepted for consideration by majority vote of the delegates present. Any resolution which does not qualify in accordance with the aforesaid provisions for consideration as regular business may be accepted for action by a majority vote of the delegates present and, if so accepted, shall be referred at once by the Speaker to a reference committee. Any such reference committee shall consider resolutions referred to it and shall report, with recommendations to the House before adjournment of the meeting.

Summary of Actions
Council Meeting

Thursday, August 15, 1974

I. Attendance

Present in addition to the Chairman, Dr. D. A. Grendon, were: Drs. Root, Jr., Spitz, Backhus, Nolan, Fabro, Bradley, Hess, Cramer, Rubinow, Ragland, Jr., James, Krinsky, Roch, Kamens, McGarry, Canzonetti, Harkins, Magram and Eslami.

Also present were: Mrs. Lindquist, Mrs. Roch (Woman's Auxiliary), Dean Massey (UConn Medical School), Mr. Tomat, Mr. Sullivan (AMA) and Dr. Richards.

Absent were: Drs. VanSyckle, Johnson, Brandon, Gardner, Granoff, Hecklau, Freedman, Dambeck, Sadowski, Mendillo, Barrett, Hastings and Klare.

Presentation of AMA-ERF Plaque

Mrs. George E. Roch, President of the CSMS Woman's Auxiliary, presented to the Council on behalf of the Auxiliary an AMA-ERF plaque (plate) which had been awarded to Connecticut by AMA-ERF in recognition of successful joint Society-Auxiliary efforts to increase the amount of AMA-ERF contributions from our state during the past year. The plaque will be suitably displayed in the Barker-Weld Room.

II. Routine Business

Approval of Minutes

As published and distributed, it was VOTED to approve the minutes of the meeting of July 17, 1974, noting on Page 8, under "Proposed New Format for CSMS Annual Meeting," the word "assessed" should replace the word "urged" with respect to the component County Associations purchasing blocs of tickets for the annual dinner.

Life Memberships

It was VOTED to approve applications for Life Membership received from the following eligible Active Members:

John T. Larkin, Sand Hill Road, Hampton (W)—1/1/74.

Daniel O'C. Sayers, 135 W. Main Street, Waterbury (NH)—1/1/75.

Samuel Spinner, 114 Sherman Avenue, New Haven (NH)—1/1/75.

Date of Next Meeting

The Chairman set Wednesday, September 11, 1974, as the date of the next meeting.

III. Old, New and Special Business

Resignations, Appointments, Etc.

(a) *Representative on Research Committee, Connecticut Cancer Epidemiology Unit:* On recommendation of the President and the Chairman of the Council, it was VOTED to designate Christie E. McLeod, Middletown, as the Society's representative on the Research Committee of the CCEU.

(b) *Representative on Implementation Task Force, State Alcohol Council:* It was VOTED to designate J. Richard Gaintner, Farmington, as the Society's representative on this Task Force. Dr. Gaintner is one of the two CSMS nominees serving on the Advisory Council to the SAC.

"Confidentiality of School Records"

It was VOTED to receive as information a Staff report on the ruling of the Connecticut Attorney General that the State's "Right to Know Law" (Section 1-20) precludes educational institutions (including medical schools) from denying a student the right to see his file, and that any agreement made by the custodian of the file to keep the contents of the file secret from the student would be in contravention of the Right to Know Law. The Attorney General notes: "As to concern that the authors of the evaluations (kept in the file) may be subject to a charge of libel, truth is a defense in a libel action."

Follow-Up Report—House of Delegates Actions, 4/30/74

It was VOTED to accept for filing a Staff report following up on two resolutions adopted by the CSMS House of Delegates at the 1974 annual meeting; i.e., "Definition of Cosmetic vs. Restorative Procedures" and "Psychiatric Care." Comments received from Connecticut Blue Cross and the Connecticut Health Insurance Council indicate substantial acceptance of the definition of "cosmetic vs. restorative procedures," as made by the House of Delegates, which is based on the concept that "a patient should receive the best restorative and reconstructive treatment (operative and non-operative) that medical science can achieve for the consequences of accident, injury, disease or congenital deformity . . . and that such restorative and reconstructive treatment is considered to be functional and not cosmetic." This resolution was also transmitted to the AMA House of Delegates and has been referred to the AMA Council on Medical Service for further study and report.

The resolution on psychiatric care advocated that third party payment programs should include benefits for psychiatric illness on the same basis as other illnesses to the end that "patients requiring psychiatric care will be able to receive such care in a hospital or a private physician's office of their choosing, and not be specifically required to attend a clinic or mental health clinic for like services." Connecticut Blue Cross has indicated that recently enacted state legislation has enabled Blue Cross to include a greater psychiatric coverage in its contracts. The Health Insurance Council opines that it is probably not feasible to include psychiatric coverage "on the same basis as all other medical illnesses" at the present time.

Report—Ad Hoc Committee on Acupuncture

It was VOTED to accept for filing a "special report" to the Council, submitted by the Ad Hoc Committee. In brief, the report sought to establish a policy statement on various aspects of acupuncture and its performance in Connecticut which, if approved by the Council, could serve as the subject official position of the Society. Following a lengthy period of discussion, during which the Committee chairman, Dr. Liao, responded to questions posed by Council members, and while several clarifying motions were under consideration, it was VOTED to table further action on the report. It was further VOTED to add members to the Ad Hoc Committee as follows: Josephine M. Fuhrmann, Woodbridge; Luke M. Kitahata, Stamford; Angelo Mastrangelo, Jr., Stamford; John N. German, New London; Edmund D. Marinucci, Norwalk; F.E.H. Lightbody, Greenwich; Louis C. Backhus, Waterbury, (Council); Stuart Ragland, Jr., Colebrook, (Council); and Charles M. Krinsky, New London (Council). The resignation of John E. Keet, Waterbury, was noted.

Communication re Acupuncture—NHCMA

It was VOTED to accept for filing a communication from the Executive Committee of the Board of Governors of the New Haven County Medical Association which brought to the Council's attention a letter received by the Board from a New Haven dentist re an "acupuncture referral service" operating in the New Haven area. The dentist alleged that the service, called "Connecticut Patients for Acupuncture," is advertising in the New Haven newspapers and offers limousine transportation to an acupuncture clinic in Springfield, Mass., and, on the telephone, is advising inquirers that "the practice of acupuncture is illegal in Connecticut" and that "there is no one in Connecticut qualified to perform acupuncture." After some discussion as to whether medical organizations had jurisdiction over the advertising practices of non-medical enterprises, it was VOTED to refer the NHCMA correspondence to the Executive Officer of the Massachusetts Medical Society as information and for whatever action may be deemed appropriate. In his letter to the NHCMA Board, the complaining dentist alleges that the Springfield acupuncture clinic initiated the arrangements with the operators of the limousine service.

Report—Committee on Third Party Payments

It was VOTED to accept for filing a report concerning an "AMA Universal Insurance Claim Form" which was submitted by the Committee chairman, S. Pearce Browning, III, Norwich. The Committee had reviewed the subject form and recommended that its existence and availability from AMA be brought to the attention of the CSMS membership. Being apprised that the availability of the form has been publicized by AMA, and the members not having had opportunity to review the form, the Council took no further action on either the report or its recommendation.

COMPAC

It was VOTED to accept for filing a written communication presented by George E. Roch, Willimantic, COMPAC Board Chairman, which reported to the Council on various aspects of COMPAC's present status, membership and present and planned activities. Although the communication engendered a considerable amount of discussion, no further action on it was taken.

Connecticut Medical Institute—PSRO

It was VOTED to receive as information a brief verbal report presented by James H. Root, Jr., Waterbury, on the progress that has been made toward getting the CMI into operation as a "support center" for the four area PSROs; also on activities of the area PSROs related to organizational planning (all have employed executive personnel). Pursuant to receiving this verbal report, the Council VOTED to request CMI officials to submit ongoing written reports on CMI developments to each meeting of the Council; i.e., at approximately monthly intervals.

Following a general discussion of the Council's desire to be kept informed of the activities of agencies in which the Society has representation, two additional subject actions were taken as follows:

(a) It was VOTED to request the Society's representative on the State Commission on Hospitals and Health Care, Sidney L. Cramer, Hartford, to submit regular written reports to the Council on the activities of that Commission.

(b) It was VOTED to request the senior CSMS-designate on the CRMP Advisory Board, Morris A. Granoff, New Haven, to submit regular written reports to the Council on the activities of CRMP.

Staff Report—CSMS Medical Student Financial Aid Fund

It was VOTED to accept as information a Staff report which described the identification with the Society that students at the Yale and UConn medical schools receive when the schools' administrations approve loans being made to them from the CSMS Financial Aid Fund. In brief, the report stated that the Society's name appears in several places in the note that the student signs in order to receive a loan; also that the check he receives stipulates the source of the funds as being CSMS.

Communication re Catastrophic Health Insurance

It was VOTED to accept for filing a copy of a letter which has been sent to J. Alfred Fabro, Torrington, to all AMA Delegates, Alternate Delegates, Presidents and Executive Officers of the six New England state medical societies asking for their reaction to, and/or support for, a proposal of the California Medical Association to draft a national catastrophic health insurance bill and have it introduced in the Congress as an alternative to several such bills already in the Congressional hopper. After some discussion, it was further VOTED to apprise CMA Delegate to AMA, Joseph F. Boyle, Los Angeles, of the action of the CSMS House of Delegates on catastrophic insurance in 1972 and of the Council's reaffirmation of the subject position taken by the House at that time; also, that the Society's support of any catastrophic health insurance legislation would be based on the assumption that such a bill would coincide with, or be "on top of," the AMA's Medicredit proposal for national health insurance.

Report—Committee on Professional Liability

It was VOTED to accept for filing a report of the Committee which included the text of a letter which is to be mailed to all CSMS members enrolled in the CSMS-Aetna Professional Liability Insurance Program. In brief, the letter reports on the experience of the Program during 1972-73, advises concerning the rising incidence of reported malpractice actions and notifies the enrollees that premium increases will be necessary when in-effect policies come up for renewal (October 1). It was further

VOTED to grant permission for the same letter to be mailed to CSMS members who are not enrolled in the Program, as information, in order to alert them to the professional liability situation in Connecticut.

N.B.: *The foregoing is a summary of the proceedings and actions of the Council on August 15, 1974. Detailed minutes of the meeting are on file at 160 St. Ronan Street, New Haven, for perusal by any interested member of the Society.*

WISCONSIN

Hospitals in Wisconsin have been asked by the Wisconsin Hospital Association to consider a no-smoking policy in patient rooms as the result of a recent fatality attributed to a patient smoking while in bed.

The WHA said, "Hospitals are also asked to consider the use of gowns, linens, etc. made of flame retardant material and the use of rinse products to enhance the flame resistant properties of such supplies."

Review, Federation of American Hospitals—June - July, 1974.

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PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a service to the medical profession in the State of Connecticut. Opportunities for physicians to locate in Connecticut will be published as space permits and will be distributed to physicians making inquiry of such opportunities. Information should be sent to 160 St. Ronan Street, New Haven, Connecticut 06511, (203-865-6822).

Physicians wishing to establish practice in Connecticut are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two consecutive issues of *Connecticut Medicine.*

OPPORTUNITIES FOR PRACTICE

(If no name is listed, contact the Physician Placement Service for more details.)

Allergist: Young M.D. to assume practice. Home-office location available. Conn. shore location.

Anesthesiologist: Excellent opportunity in expanding hospital. Multi-specialty medical staff. Contact: Chief of Anesthesiology, Rockville General Hospital, Rockville, Conn. 06066.

Emergency Room: Four hospitals each have full time positions available.

Emergency Medical Services: Director of State Office of EMS. $28,000 salary. Contact: Douglas S. Lloyd, M.D., 79 Elm Street, Hartford, Connecticut.

Emergency Room: Full time. Modern 204 Bed Accredited Community Hospital. Located on southwestern coastline. Close to metropolitan New York.

Family Practice: Community Search Committee desires primary physicians. Central Connecticut. 300 bed hospital. 100,000 population. Excellent opportunity. Numerous cultural advantages. C. W. Wickersham, M.D., 44 Haynes Street, Manchester, Conn.

Family Practice: Three partners seek additional coverage. Mostly office type general practice. Some industrial medicine. Coastal community.

Family Practice: Society maintains a list of nineteen opportunities for family physicians.

Occupational Medicine: Chief of Health Services for State Employees. Pre-employment and periodic physicals. Experience in occupational health. Mr. John Crowley, State Health Dept., 79 Elm Street, Hartford. 566-3799.

Occupational Medicine: Large Conn. manufacturer. Examining new and existing employees. Large support staff to assist with treating occupational injuries and disease resulting from employment. Connecticut license required. Professional confidence maintained.

Primary Care Physicians: Young M.D. presently in practice wishes to establish primary care group. Community needs physicians. Growing population. Conveniently located.

Internist: Associate to join established physician in New Haven area.

Internal Medicine: Opportunity in Greater Hartford area.

Internal Medicine: Twenty-five opportunities for internists are on file with the Physician Placement Service.

Neurology: Private practice. Need for EEG interpretations. Southwestern Connecticut.

OB/Gyn: Solo practitioner needs associate. Waterbury area.

OB/Gyn. Multi-specialty group in northwestern Connecticut. Numerous benefits. Internist needed also.

Ophthalmologist: New Milford area can support additional ophthalmologist. Office space and assistance available. Morris L. Clark, M.D., 21 Elm Street, New Milford, Conn.

Ophthalmologist: Office space in new medical building. Area needs an ophthalmologist. Northwest corner of Connecticut. Frank Lovallo, M.D., Sharon, Connecticut 364-5161.

Ophthalmologist: Associate in busy, general eye practice. Urban setting. Office space designed and available.

Orthopedics: Practice of deceased physician available in Hartford. Furniture, equipment and files.

Orthopedics: Associate needed in surgical practice. Area needs additional coverage. Frank Lovallo, M.D., Sharon, Conn. 364-5161.

Otolaryngologist: ENT and Audiological Center. Equipped for complete diagnostic evaluation of patients. Associated with 700 bed community hospital.

Pediatricians: Three opportunities in southeastern Connecticut shoreline communities.

Psychiatrists: Several openings through institutions and agencies of the State Department of Mental Health, 90 Washington Street, Hartford, Conn.

PHYSICIANS WISHING TO LOCATE IN CONNECTICUT

(If no name is listed, contact the Physician Placement Service)

Allergist: Board certified. Connecticut license. Desires New Haven or surrounding areas.

Dermatologist: Available September 1974. Completing military obligation. Board certified. Solo or group. Univ. of Michigan Medical School. Residency: Univ. of Virginia Medical Center. Robert D. Greenberg, M.D., U.S. Army Hospital, Augsburg, APO N.Y. 09178.

Dermatologist: Available immediately. Solo, group, associate arrangement in medium sized community. 29 yrs. old. Board eligible. Especially interested in southwestern Conn. Medical College of Va.; U.S. Naval Hospital in Philadelphia.

Family Practice: Desires small town. 29 yrs. old. Presently in practice. Wishes to return to northeast in primary care type practice. Case Western Reserve. Wife seeking employment as social worker. Henry Brodkin, M.D., 61 6th Avenue, San Francisco, Cal. 94118.

Family Practice: Desires coastal area. Trained in Dublin, Ireland and Cook County Hospital, Chicago. Illinois license. 29 years old. Available with short notice. Dermot B. O'Brien, M.D., Apt. 2-P, 1120 E. Algonquin Road, Schaumburg, Illinois 60172.

Internal Medicine: Connecticut license. FLEX. Board eligible. Prefers institutional practice. 34 years old. Available now. Sebastian P. George, M.D., 43 Woodland Park, Hartford, Conn. 06105.

Internal Medicine: Board eligible 1974. Board eligible in cardiology 1975. Medium or small community. Group or associate practice. Princeton and Cornell. 32 yrs. old. George E. Berk, M.D., Ridder Apts., 4-5, Valley Road, Manhasset, New York 11030. (516-627-4046)

Orthopaedic Surgery: Group or Associate practice. On priority list for U.S.A. Visa. Robert K. Ellis, M.D., 404 Griffin Street, London, Ontario, Canada.

Internal Medicine and Endocrinology: Available December 1974. Group practice desired. Princeton and Johns Hopkins. ABIM taken in June 1974. Maryland license. Completing Fellowship at Duke University Medical Center. John H. Machledt, Jr., M.D., 3321 Alabama Avenue, Durham, N.C. 27705.

Internal Medicine: Cardiology: Board eligible. Group practice. Fordham and Jefferson Medical College. 30 yrs. old. Married. Thomas J. Cuomo, Jr., M.D., 5405 Markview Lane, Richmond, Virginia 23234.

Internal Medicine: Board eligible, Conn. licensing pending. FLEX. Residency done at Hartford Hospital. Joseph J. Farraye, M.D., 121 Vera Street, West Hartford, Ct. 06119.

Internal Medicine: Available immediately. Board certified. Medium sized community. Group or associate practice. Board qualified for pulmonary medicine. 32 yrs. old. Univ. of Vt. and Downstate Medical. Robert H. Israel, M.D., 454C Jadwin Loop, Ft. Belvoir, Virginia 22660.

Internal Medicine: Board eligible. Available immediately. 31 yrs. old. New York license. Interned at Bridgeport Hospital. Parvaiz Naseem, M.D., 53-12 97th Street, Corona, New York 11368.

Internal Medicine/Nephrology: Board eligible. 32 yrs. old. Completing Columbia P and S Fellowship. Medium sized community. Group or associate practice. Available in September. Prefers Southern Connecticut. Austin M. Pattner, M.D., 5960 Culzean Drive, Dayton, Ohio 45426. USAF

Internal Medicine: Available immediately. Conn. license. Board certified. Wishes to join group of board eligible or certified internists. Kenneth E. Sack, M.D., 2152 Glencoe Hills Dr., Ann Arbor, Michigan 48104.

Gastroenterologist-Internist: Available January 1975. Group Practice desired. Completing Fellowship and military service. Prefers Western Connecticut. Diplomate, National Boards: Qualified, ABIM, October 20, 1970. Stephen Glouberman, M.D., 1403-A Washington Blvd., Presidio of San Francisco, California 94129.

Pulmonary Medicine: Available now. Board certified. Dartmouth and Harvard Medical. Presently at Mayo Clinic. William C. Sheehan, M.D., 1403 Durand Court, Rochester, Minnesota 55901.

Internal Medicine: Medium or small sized community. Board eligible. Solo or associate practice. Allen J. Zobay, M.D., 3338 Cherryhill Drive, Fairfield, Ohio 45014.

OB/GYN: Available immediately. FLEX. Board eligible. Experienced in laparoscopy. Anant R. Bhati, M.D., 506 Dixmyth Avenue, Cincinnati, Ohio 45220.

OB/GYN: GYN practice with limited OB. 38 years old. Pa. license. T. K. Ghosh, M.D. RD No. 4, Danville, Pennsylvania 17821.

OB/GYN: Board eligible. 39 yrs. old. Connecticut license. Group or associate practice. Interned at St. Raphael's, New Haven, 1965-66. Available with short notice.

OB/GYN: Available now. Board eligible. FLEX. Amherst and Bologna (Italy). Completing military service. Michael Solomon, M.D., Blake Road, Limestone, Maine 04750.

OB/Gyn: Connecticut license. Part-time position only. Bilingual-English and Spanish. FLEX. Board eligible. Jose M. Eguia, M.D., 50 Franklin Street, Waterbury, Conn.

Ophthalmology: Presently available. Completing residency at Brooklyn Eye and Ear Hospital. Board eligible. Anthony R. Napolitano, M.D., 952 77th Street, Brooklyn, New York 11228.

Ophthalmology: Glaucoma and pediatric ophthalmology. Board eligible. Solo, group or associate practice. Large or medium sized community. 31 yrs. old. Stuart A. Terry, M.D. 518 Cloudcroft Drive, San Antonio, Texas 78228.

Orthopedic Surgery: Available now. Diplomate of National Board. Board eligible. New York and New Jersey licenses. 34 yrs. old. Medium sized community. Anthony J. Kaiser, M.D., 38 Clarendon Place, Bloomfield, New Jersey.

Otorhinolaryngologist: Connecticut license. (FLEX). Board certified. 38 yrs. old. Trained in Warsaw, Poland. Residency: Albert Einstein Medical Center. Group or associate practice. Stefan A. Kucinski, M.D., 61-20 Grand Central Parkway, Forest Hills, New York 11375. (212-271-8880).

Pathologist: AP and CP. Board eligible. Ohio license. Presently at UConn Health Center. 33 yrs. old. Anand Arora, M.D., 45-C, Grandview Drive, Farmington, Ct. 06032.

Pathologist: Board certified. Desires institutional setting in large city. Presently chief of lab service. 53 yrs. old. Walter C. Beck, M.D., 2147 Boston Court, Indianapolis, Indiana 46208.

Pathologist: Available December 1974. A. and C. experience. New York and Pennsylvania licenses. Board eligible December 1974. San-Goan Tan, M.D., 101 Belmont Circle, Syosset, New York 11791.

Pediatrics: Connecticut license. Residency at University Hospital of Cleveland and Yale-New Haven. Interested in dermatology. Will complete active duty in September. Board eligible. Group or associate practice desired. Stephen King, M.D., 3417 High Street, Dover, Delaware 19901.

Pediatrics: Board eligible. Desires group practice in large community. Special training in infectious diseases and microbiology. McGill trained. 33 years old. Ronald M. Shapera, M.D., 509 de Gaspe, Nuns Island, Montreal, Canada 201.

Psychiatrist: Board eligible. Available now. Part-time or full-time salaried position. General, no child psychiatry. Medium or small community. B.U., University of Vermont and UCLA trained. James S. Brust, M.D., 4409 Via Pinzon, Palos Verdes Estates, California 90274.

Radiology: Available January 1975. Diagnostic Radiology. License pending. Elizabeth Delia Hodby, M.D., 66 Isabella Street, Apt. 1803, Toronto, Ontario, Canada.

General Surgery: Board eligible. Connecticut license. Available now. Group or associate practice in large or medium sized city. 32 years old. Leslie Elliott Strong, M.D., 66-32 Burns Street, Rego Park, Queens, New York 11374.

General Surgery: Board eligible. New York license. Associate type practice in medium sized community. Sub-specialty training in vascular and orthopedic surgery, traumatology. Hyman Miller, M.D., 240 Garth Road, Scarsdale, New York 10461.

General Surgery: Board Eligible. FLEX. Group practice in large community. Available now. Ghulam Moheyuddin, M.D., c/o Blair, R.D. 1, Worcester, New York 12197.

General Surgery: Board certified. Medium sized community in group or associate type practice. Available November 1974. Franklin L. Rutberg, M.D., Kenilworth, Apts. No. 503. Philadelphia, Pennsylvania 19144.

General Surgery: Board eligible. Available January 1975. American Boards in General Surgery to be taken in December 1974. Canadian schools. Douglas W. Denton, M.D., 662 Galloway Cres., London, Ontario, Canada.

General Surgery: Board eligible, FLEX. Two years of private practice. Available now. P. I. Mathew, M.D., 97-15 Horace Harding Expway., No. 9K, Flushing, New York 11368.

Thoracic Surgery: Available January 1975. Board eligible. NYU and Cornell. Presently at Boston City--B.U. Hospital. Jack C. Lee, M.D., 860 Harrison Avenue, Apt. 805, Boston, Mass. 02118.

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1974-1975

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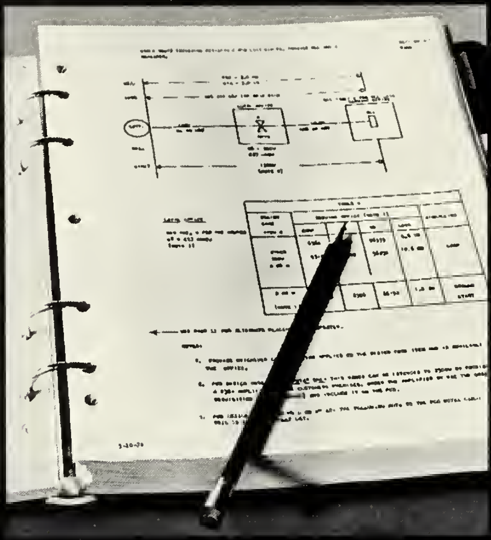

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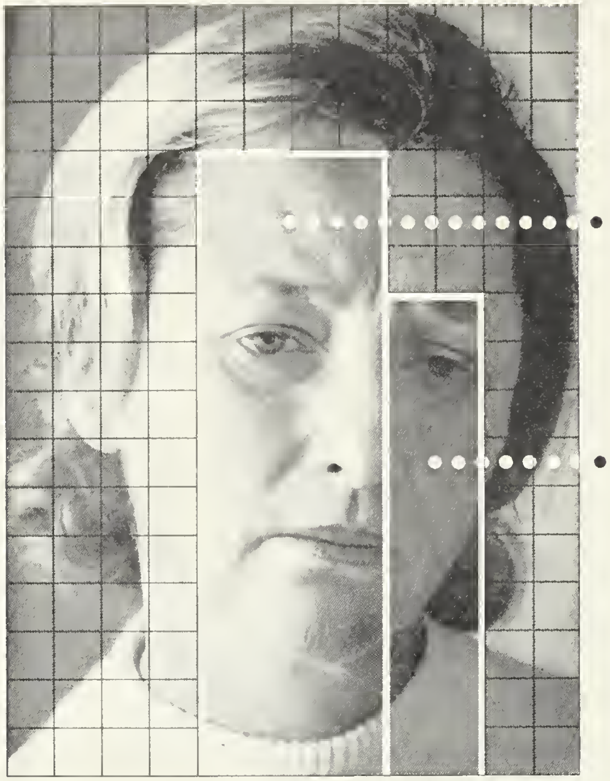
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The National Cancer Program

Frank J. Rauscher, Jr., Ph.D.

Three years ago Congress passed and President Nixon signed into law the National Cancer Act of 1971, an event that strengthened considerably the Federal Government's commitment to control cancer. Just recently, July 23, 1974, Mr. Nixon signed into law amendments that solidify and broaden the government's commitment to eradicate cancer.

Obviously, the control of cancer is an elusive, difficult goal, but as Director of the National Cancer Program and HEW's National Cancer Institute (NCI), I can report steady and meaningful progress.

The five-year survival rate for cancer patients in the 1930s was about one in five. Today the figure is one in three. On the basis of five-year survival, about 218,000 Americans will be saved from cancer this year. About 1.5 million Americans are alive and free of cancer five years after treatment, and an additional 700,000 cancer patients diagnosed and treated within the last five years will live to join these ranks.

The State of Connecticut is participating in this progress. In fiscal year 1974, for example, nearly $10 million of NCI support was awarded to Yale University for cancer center, research, training and construction grants and research contracts. Further testimony to Yale's important contributions in the field of cancer came on June 13, 1974, when the Yale Medical School was identified by NCI as a part of an emerging network of Comprehensive Cancer Centers. Hopefully, this membership in the national network of cancer centers will assist Yale in its efforts against cancer in Connecticut.

The State has an excellent Tumor Registry, which began in 1935 and at that time was the only true population-based tumor registry in the United States. Since then, it has routinely collected data on incidence, survival, treatment and mortality.

In 1974, about 10,000 cancer patients in Connecticut will be newly diagnosed as having the disease, and there will be 5,400 cancer-related deaths in the State.

The National Cancer Program is attacking the problem of cancer. Cancer's complex nature requires a coordinated research effort of unprecedented dimensions. Many methods and approaches must be used to solve problems and gain significant knowledge, and then to put that knowledge to work for the cancer patient.

Since its creation in 1937 the NCI has been the primary agency through which the Federal Government has supported cancer research. Expansion of cancer research under the National Cancer Act of 1971 was undertaken because of the conviction that current medical and scientific understanding of cancer could support sustained pursuit and exploitation of new scientific leads in prevention, diagnosis, and treatment. The Act required the development of an intensified and coordinated national program to accelerate the effort to bring cancer under control.

With Presidential, Congressional and public support, the federal cancer budget grew from $238 million in fiscal year 1971, to $378 million in fiscal year 1972, to $432 million in fiscal year 1973 and to $589 million in fiscal year 1974. Support in fiscal year 1975 will be a minimum of $660 million.

The dual priorities of the National Cancer Program are to mobilize and disseminate existing research information and technology to benefit cancer patients and those at risk to cancer, and to support basic research to advance information and technology of cancer.

The National Cancer Act of 1971 and the National Cancer Act Amendments of 1974 provide NCI special authorities and mandates for development of the National Cancer Program. One of these called for the development of an overall strategy—a National Cancer Plan. NCI's Plan presents the major national goals, objectives, program strategy, implementation strategy, and estimates of resources needed to achieve the objectives. The Plan represents a consensus of the scientific community; it was developed with the advice and guidance of 250 laboratory and clinical scientists from across the country who met in 40 planning sessions about three years ago to lay the groundwork for the current Plan.

The National Cancer Plan is an inventory of scientific areas to be covered with designated priorities and opportunities perceived at the time of its formulation. Because the Plan becomes quickly outdated due to the change and progress in science, it undergoes frequent revisions and adjustments.

Another legislative mandate is NCI's Cancer Control Program. This program speeds application of existing and emerging knowledge for the direct benefit of cancer patients. The high priority of the Cancer Control Program is the result of high public, Congressional, and scientific interest in applying research results to the public good.

Cancer control projects are designed to widely demonstrate the new and evolving techniques of cancer prevention, detection and diagnosis, treatment, and rehabilitation. Most activities will be

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FRANK J. RAUSCHER, JR., Ph.D., Director, National Cancer Program, National Cancer Institute, Bethesda, Maryland.

aimed at controlling the occurrence and impact of many of the leading causes of cancer deaths in the United States: cancers of the lung, breast, cervix, head and neck, the leukemias, and lymphomas.

Under the direction of Dr. Diane Fink, the Cancer Control Program provides for continuing education of health professionals and the public, demonstrations of effective cancer control techniques, and the development of model systems for the treatment and management of cancer patients. The Program also supports studies seeking more effective means to utilize existing knowledge about cancer.

In 1973, NCI began two major control activities. The first demonstrates the latest and most effective treatments for acute lymphocytic leukemia in children, Hodgkin's disease, and other lymphomas.

The second, a joint activity with the American Cancer Society (ACS), established 27 breast cancer detection demonstration projects throughout the country, with consideration for geographic distribution and the potential to promote service to all women at risk. The nearest such project available for Connecticut residents is in New York City. American Cancer Society volunteers and others are motivating women in these 27 communities to undergo these free examinations. Procedures include a medical history, a clinical examination supervised by a physician, and the use of thermography and mammography, or xeroradiography. Local physicians and allied health professionals are being trained in detection techniques.

The Cancer Control Program is defining other projects that can be started rapidly. These include demonstration projects in rehabilitation; telephone consultations linking physicians in practice with cancer specialists; and the coordination of the medical facilities of a geographic area to provide comprehensive cancer detection services for the population.

Another major thrust of the National Cancer Program is the development of Comprehensive Cancer Centers. Through Comprehensive Centers and smaller, specialized centers, NCI supports a broad range of specialized preclinical and clinical research activities in institutions all over the United States.

Comprehensive Cancer Centers, such as the one at Yale, coordinate educational, clinical, and research activities in a broad attack on the complex problems of prevention, detection, diagnosis, treatment and rehabilitation. Comprehensive Cancer Centers provide coordination and leadership through outreach activities to medical service communities within their geographic regions, to assure the availability of complete care for all cancer patients.

The Yale comprehensive Cancer Center, one of the 17 now operational, is directed by Dr. Joseph R. Bertino. Yale is expanding its regional activities in cancer detection, community outreach and education in cooperation with the University of Connecticut at Storrs, which has an NCI-supported Specialized Cancer Center directed by Dr. Philip I. Marcus.

The Yale Center will integrate its already existing multidisciplinary activities, including outstanding programs in medical oncology headed by Dr. Bertino; pharmacology, under Dr. Robert Handschumacher; and radiotherapy, under Dr. James Fischer.

With the assistance of NCI grants, research in drug development, virology, immunology, epidemiology, and pediatric oncology will be strengthened and coordinated with both new and ongoing cancer research programs.

Through a constant flow of scientific information, progress made in all centers may quickly benefit cancer patients throughout the U.S. It is for these research and associated activities—not general patient care—that NCI provides financial assistance.

The other 16 centers identified as being comprehensive are:

Memorial Sloan-Kettering Cancer Center, New York, New York.

M.D. Anderson Hospital & Tumor Institute, Houston, Texas.

University of Wisconsin Clinical Cancer Center, Madison, Wisconsin.

Roswell Park Memorial Institute, Buffalo, New York.

Fred Hutchinson Cancer Research Center, Seattle, Washington.

Sidney Farber Cancer Center, Boston, Massachusetts.

University of Alabama at Birmingham, Alabama.

The Johns Hopkins Medical Institutions, Baltimore, Maryland.

Duke University Medical Center, Comprehensive Cancer Center, Durham, North Carolina.

Los Angeles County-University of Southern California Cancer Center, Los Angeles, California.

Comprehensive Cancer Center of Greater Miami, Miami, Florida.

Mayo Comprehensive Cancer Center, Rochester, Minnesota.

Colorado Regional Cancer Center, Inc., Denver, Colorado.

Illinois Cancer Council, Chicago, Illinois.

Vincent T. Lombardi Cancer Center, Cancer Research Center (Georgetown University, Howard University), Washington, D.C.

Fox Chase Cancer Center, Univ. of Penn., Phila., Pa.

Specialized cancer centers, of which there are about 50 in the United States, conduct a wide variety of basic and clinical research activities. Most of these will continue to operate as specialized centers, but some eventually may evolve into Comprehensive Centers.

As NCI Director, one of my functions is to assess, with guidance from the President's Cancer Panel, National Cancer Advisory Board, and other panels of experts, including NCI senior staff, the most promising areas for exploration and further work, and to achieve an adequate balance among the wide variety of program activities.

To illustrate, how much should be spent on research to find out what makes a normal cell become cancerous?

How much should be invested in specific cancer detection and diagnosis measures?

How much should be spent on patient rehabilitation efforts?

How much emphasis should be placed on immunology, which may be one of the brightest hopes of the future?

Clearly, such questions are not easily answered, because of the limitations on the available dollars and basic knowledge, but they must be carefully evaluated to plot the best course.

In summary, the National Cancer Institute conducts a national program in cancer research matched by an effort to bring the best of today's science to the cancer patient.

To do this, NCI is mobilizing the best minds in this nation and others. Even partial achievement of any of the national program's objectives might significantly reduce the incidence, morbidity, and death rate of cancer in man. In the final analysis, that is our goal.

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Coronary Angiography: Status Report 1974

Allan M. Ross, M.D. and Lawrence S. Cohen, M.D.

Selective coronary angiography is currently the pivotal procedure in the development of new approaches to the understanding and therapy of coronary heart disease in man. It is a procedure of definable risks and limitations, but less standardized indications. The following discussion outlines the development, current status, and future of this and related techniques. It also represents the authors' views on indications for coronary angiography in 1974.

Development

Werner Forssmann, in 1929, using a mirror and fluoroscope, cannulated his own right atrium via a forearm vein, thereby initiating the era of cardiac catheterization. Clinical and investigational use of this technique was developed in the 1940's by Andre Cournard and Dickinson Richards. All three of these pioneers were eventually honored with the Nobel Prize for Medicine in 1956. Through the 1950's catheterization techniques were refined for the study of general hemodynamics, of congenital disease and of acquired valvular heart disease. The formulae of Gorlin and Gorlin for calculating orifice area in valve stenosis was a major contribution of that decade.

In the decade of the 1960's attention turned to investigation of the coronary circulation, even though successful operative techniques were not available. Much of the credit for developing and popularizing the use of selective coronary angiography goes to Mason Sones and his co-workers at the Cleveland Clinic. It was the availability of high quality film demonstrating detailed coronary anatomy, that laid the cornerstone for valid analysis of the epidemiology, medical treatment and surgical therapy of coronary disease.

Epidemiological study of the natural history and the role of risk factors in coronary heart disease rests upon a valid diagnosis in patients suspected of having this entity. Angiography enabled investigators to at last examine the characteristics of carefully defined subgroups of patients. A well known example was isolation of those individuals with a single lesion in the right coronary artery and discovery that their prognosis was good, approaching that of patients without established clinical coronary heart disease. Without angiography, subgroups of patients with presumed ischemic disease could only be lumped together, obscuring important distinctions and detracting from the validity of any conclusions.

Similarly, new medical therapy for ischemic heart disease could not have logically been evaluated without qualification and quantification for the population selected for treatment. In every large reported series of angiography in patients with angina, a percentage of subjects are found to have normal coronary anatomy. Obviously inclusion of such patients in drug trial studies would seriously hamper interpretation of response to the agent under investigation.

Finally, selective coronary angiography made possible a rational approach regarding bypass graft operations in coronary disease. Without detailed knowledge of lesion location, severity, collateralization and run-off, development of these operations would have been virtually impossible. Furthermore, short and long term evaluation of the results of such surgery is dependent upon follow-up selective arteriographic studies.

Current Status

The 1970's find us evaluating criteria for proper patient selection for angiography and surgery, and for better and safer techniques while carrying out both diagnostic and therapeutic interventions.

Selection for Study

In 1974, generally accepted criteria for recommending coronary angiographic study are listed in Table I.

TABLE I

INDICATIONS FOR CORONARY ANGIOGRAPHY

1. Severe angina pectoris, refractory to medical therapy.
2. Post-operative evaluation of bypass procedures.
3. As part of pre-operative evaluation in valvular heart disease.
4. Poor risk subgroups (i.e., "pre-infarction" or "rest" angina).
5. Angina or atypical chest pain in young patients.
6. Intractable congestive failure or ventricular arrhythmia.
7. Unusual indications (i.e., relating to insurability, hazardous job performance, etc.).

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The primary indication for study continues to be severe angina pectoris despite a good trial of pharmacological therapy. Although Nitroglycerine is still the mainstay of treatment for an anginal attack, the use of full doses of Propranolol (i.e. 160-320mg/day) should be administered daily before medical therapy can be considered unsuccessful. Additionally, a trial of long acting nitrates is appropriate, and contributing factors such as obesity, smoking and hypertension must be alleviated if possible.

Final assessment of the success of medical therapy or the severity of angina remains a somewhat subjective evaluation. The younger, more active patient is perceived as being severe or "intractable" at a different level of attack rate than his older or more generally sedentary counterpart who has adapted to his limitations.

During the present quest for adequate assessment of coronary bypass surgery results, perhaps the second major category of angiography candidates are the post-bypass operation patients. It is imperative that changes in symptom state, objective measures of function and ultimate longevity, be correlated with graft patency rate, coronary disease progression and ventricular function. These data are critical in the refinement of our therapeutic approach. Thus, many centers repeat coronary angiography a year after operation.

Candidates for other types of cardiac surgery, i.e., valve repair or replacement, often require angiography as part of pre-operative work-up. Such indications include the patient with angina pectoris and aortic stenosis. Angina may not be relieved by valvular surgery if unsuspected coronary lesions are left untreated. Also, variant coronary anatomy, such as the circumflex coronary artery taking origin from the right coronary must be identified pre-operatively. Without this information, sutures for valve insertion placed in the usual positions may occlude a major coronary vessel leading to infarction and death.

Certain groups of ischemic heart disease patients have been identified, whose prognosis for immediate or five year survival is particularly poor. Noteworthy among these are patients with persistent angina at rest including the pattern called "preinfarction angina." Also, patients with particularly "ischemic" exercise tolerance tests who have a high incidence of main coronary lesions (Figure 1) have an inordinately increased risk of death. Consequently, current practice is to proceed more promptly in such individuals to angiography and surgery in an effort to interrupt the natural history of these subgroups. When possible, however, we presently favor a stabilization period for patients with persistent angina at rest. Propranolol and nitrate therapy with several weeks of in-hospital rest appears to favorably affect subsequent outcome. Furthermore, following such a regimen, some patients return to a much lower symptom level and emergency operative intervention is obviated.

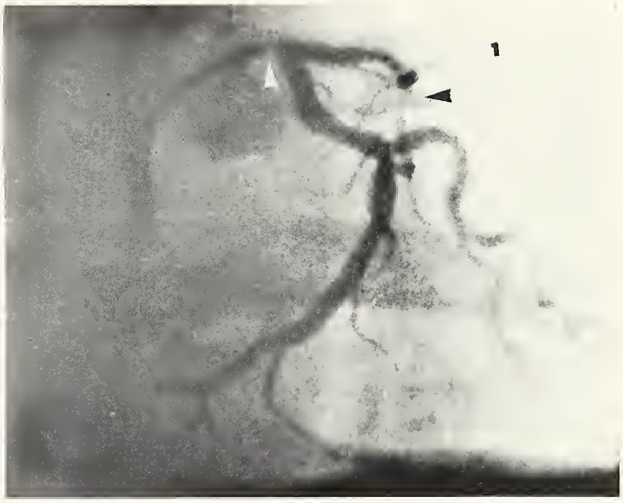

Figure 1

Left Coronary Artery in AP Projection. Note high grade main left coronary lesion (white arrow) and complete occlusion of left anterior descending artery (black arrow).

In many centers, young patients with angina or less classical chest pain syndromes are studied to identify and treat promptly those with coronary lesions, and to separate and reassure the group without significant coronary obstruction.

On occasion, persistent heart failure or arrhythmia rather than pain is the indication for coronary angiography and ventriculography. Here the goal is identifying a discrete operable abnormality (usually ventricular aneurysm), which when corrected, may lead to dramatic post operative improvement.

Lastly, and infrequently, certain unusual indications occasion angiography. These have included questions of insurability and evaluation for performing hazardous jobs, such as piloting an airliner.

In many ways the selection of patients for study is inseparable from selection for operation. We do not at this time perform coronary angiography in patients who have sustained a myocardial infarction and then become relatively asymptomatic. In some centers, however, especially where there is firm conviction that revascularizing operations prolong life, a reasonable suspicion that coronary artery disease is present justifies angiography and surgery. This aggressive approach is not held universally, however, for three reasons: 1) The risk of angiography. 2) The risk of surgery. 3) The lack of documentation of long term operative benefit on survival.

Risks of Angiography

Data on angiographic morbidity and mortality have recently been reviewed.[1] [2] Both morbidity and mortality are inversely related to the experience of the catheterization team. In 173 institutions surveyed, the combined mortality rate was 0.45%.[1] The mortality ranged from .05% at an institution performing more than 1,800 cases per year, to 8% in an institution doing fewer than 50 cases per year.[2] A similar disparity was recognized when non-fatal complications, including myocardial infarction, cerebrovascular accident and vascular occlusion of the extremity utilized for study were analyzed (Figure 2).

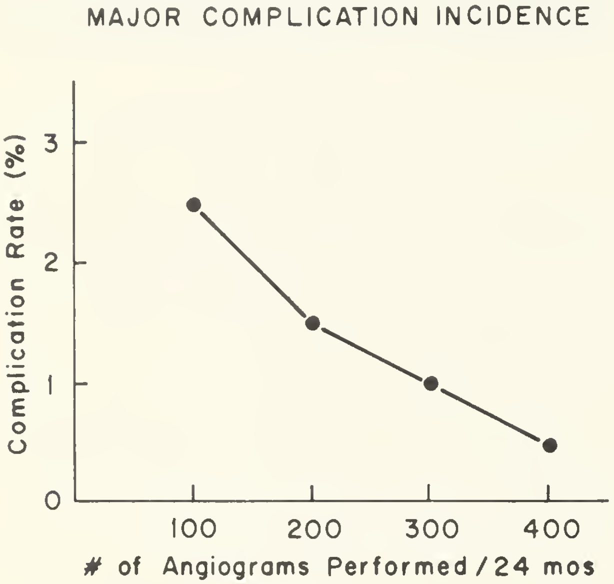

Figure 2

Decreasing complication rate of coronary angiography is achieved at institutions performing greater number of procedures (extrapolated from references 1 and 2).

It now appears certain that there are also intrinsic differences in risk when the brachial approach ("Sones") is compared to the femoral approach ("Judkins") for coronary cannulation. With the brachial approach local arterial occlusion is more common. With femoral procedures, myocardial infarction, stroke and death are more frequent, although the difference diminishes as caseload increases.

There has been speculation that the femoral approach, technically far less difficult than the brachial, has allowed individuals with less training and less expertise in handling complications, to nonetheless perform coronary angiography. This factor, claim proponents of the "Judkins" technique, accounts for most of the increased reported rate of untoward events. There is other evidence, however, that use of guide wires, mandatory in the percutaneous technique, provides a nidus for potentially dangerous small platelet thrombi. In regard to risk of death at angiography, this appears also to be in part a function of disease severity. Patients with left main stem coronary lesions or similar compromise from high grade two-vessel proximal lesions have been shown to carry the highest procedure-related mortality rates.[3] Furthermore, Hildner and his associates have shown[4] a significant mortality (1.2%) and morbidity rate amongst seriously ill cardiac patients merely awaiting but not receiving catheterization and angiography. He has termed these events "pseudo-complications" of catheterization, as they would have been ascribed to the procedure which had been scheduled for within 48 hours of the untoward event.

Risk of Operation

Major centers are currently reporting bypass grafting operative mortality between 1% and 5%, volume of cases or experience of the operating team again affecting these rates. A recent report[5] from a private hospital doing a limited number of operations (55 cases) cited a surgical mortality of 20%! Only 36% of these operations were free of major complications. The risk of operation is also influenced by criteria used to select patients for surgical management. Candidates in congestive heart failure and cardiogenic shock pose a higher risk than do patients with stable angina pectoris.

Long Term Operative Benefit

One year graft patency rate from the larger series runs 60-80%. Some of the factors affecting graft patency are size of grafted vessel, adequacy of runoff, and flow rates thru the graft at time of operation. Relief of symptoms can be expected in up to 80% of patients, even including some with occluded grafts, (reduction of angina in these patients has been attributed to denervation of the myocardium or intra-operative infarction of previously ischemic tissue).

At this time, documentation of improved ventricular function is scant, although there are reports of improved exercise tolerance after operation.[4] The long term survival rate, especially as compared with patients not operated, is crucial data not as yet available.

Immediate Future

The vehicle to convey us into the next phase of applying angiography and surgery in the management of coronary disease, has already been fabricated. It is the randomized controlled study of long term operative benefits. Such studies are underway for evaluating surgery in both the chronic stable angina patient and in the acute of "pre-infarction" patient. Best estimates are that within three to five years valid comparisons will be available from the United States and from Western Europe. Obviously the indications for angiography and for surgery will then be revised based on those data. At present there are proponents who predict that at such time proven improvement in prognosis after surgery will foster the explosion of angiography and operation to embrace the entire coronary heart disease population. On the other hand, some informed skeptics warn moderation and, remind us of the unjustified enthusiasm that has attended previous forms of management in this disease. As always, time will adjudicate.

Until these data become available, considerable effort and industry will be devoted to improvement of techniques. Recognition of the thrombogenicity of cardiac catheters and guide wires will lead to the development and availability of safer materials. Awareness of the risks of angiography as relates to the experience of the catheterization team should result in most patients being referred to larger centers for these procedures, where the risks are minimized, and skills in dealing with complications are practiced. A parallel development, the fledgling field of isotope myocardial imaging will expand over the next few years to complement the coronary angiogram and perhaps in some areas, to supplant it. Angiograms demonstrate arterial and arteriolar anatomy and "flow," whereas, isotope imaging will provide information on tissue perfusion. This will be useful in evaluating both native coronary deficiencies and the results of bypass grafts.

In the near future, simultaneous with improvement in diagnostic tools, surgical techniques will be refined. Increasing use of the internal mammary artery rather than a saphenous vein is one likely modification, especially for left anterior descending coronary artery lesions. This eliminates need for the aortic end of the anastomosis, and interposes as the graft a vessel accustomed to systemic pressures. Some of the vein bypass closures have been by intimal proliferation, possibly in response to unaccustomed arterial pressure load.

The areas of epidemiology, pharmacological therapy and preventive medicine will be active ones. Better and more specific information on the natural history of coronary disease will continue to become available. Newer drugs, notably improved agents for beta adrenergic blockade will be marketed. Hopefully also, preventive medicine will find its place soon in the control of this disease. The question of risk factors, not strictly germane to this discussion, nonetheless bears heavily upon it. The current controversies regarding the benefit of lipid reduction, blood pressure control and avoidance of smoking, inactivity and obesity will be complicated, time-consuming and laborious issues to sort out. Nonetheless, in the overview of the field no diagnostic or therapeutic modality can supplant the primary goal of prevention. The future must eventually include positive identification of the etiology or etiologies of coronary disease and specific interdictory measures to someday obviate the need for still newer diagnostic and surgical techniques.

Conclusion

This is a challenging transitional era for those involved in the field of coronary heart disease. We have now and are refining ways of visualizing the coronary lesions, providing symptomatic relief, assessing therapeutic results, and hopefully prolonging useful life. Current tools will also contribute to achieving the eventual goal of disease prevention. In 1974, however, the individual physician is obliged to follow some reasonable guidelines while he awaits more definitive information. Such guidelines have been presented in this review.

Coronary angiography and bypass surgery have an important place in medicine today but carry very definite risks, and in some respects, uncertain results. Consequently, these procedures should be restricted at present to patients with significant limitations or to those in particularly poor prognostic categories. The risks themselves, can be modified by meticulous technique and after considerable experience by a team performing several hundred of these procedures yearly.

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Radionuclide Evaluation of Cardiomegaly

Gerald S. Freedman, M.D. and Savita Puri, M.D.

Radionuclides are an effective means of evaluating cardiomegaly and establishing the differential between pericardial effusion and enlarged intracardiac blood pool. Until recently, albumin labeled with I-131, which remains in the vascular system, was used to evaluate the intracardiac blood pool. Another widely available agent, Indium 113m in acid solution has also been used. Although these agents are still available and acceptable, the use of technetium-99m as technetium albumin has been advocated. Despite its very short half life the presence of beta radiation from 113m-In and 131-I HSA results in a slightly higher dose to the whole body and blood than from 99m Technetium albumin which would be the preferred isotope (see Table 1). The following describes the procedure for radionuclide studies of the heart.

TABLE I

RADIONUCLIDES USEFUL FOR PERICARDIAL IMAGING(1)

Agent	Effective Half Life	Usual Dose (mCi)	Radiation Dose (rad)	
			Whole Body	*Target Organ*
^{131}I HSA	6 days	0.5-1.5	1-4	blood 7-26
^{99m}TcO$_4$	3 hr.	5-15	0.02-0.04	colon 0.75-2.25
^{99m}Tc HSA	6 hr.	2-5	0.03-0.06	blood 0.09-0.2
^{113m}In	1.9 hr.	3-5	0.07-0.1	blood 0.2-0.3

Methods:

1. The procedure for scanning the heart begins several minutes after intravenous administration of the isotope to permit intravascular mixing. The scan should include the area from the sternal notch caudally until the entire liver can be visualized on the dot scan. The focal plane of the collimator must be carefully positioned through the heart. A moderate degree of contrast enhancement and background suppression is recommended. The resulting scan is compared to or superimposed upon a radiograph of the chest. It is recommended that a supine chest film be obtained for this comparative purpose and that the tube-patient distance should be greater than 60 inches (6 foot is preferred). Shorter distances cause a geometric magnification which results in apparent cardiomegaly and may lead to the false-positive diagnosis of pericardial effusion. The ratio of the diameter of the intracardiac blood pool (determined from the scan) and the cardiac margin determined from the radiograph is calculated. Also, the distance from the lower edge of the intracardiac blood pool and the superior hepatic margin should be measured. Using this technique the diagnosis of pericardial effusion can be offered if the intracardiac blood pool diameter is less than 80% the transverse cardiac diameter and the intracardiac-hepatic distance is greater than 2 cm. Evaluation of this method using a simulated pericardial effusion established a lower level of sensitivity for small hearts to be approximately 200cc when using I-131-HSA and a lower limit of 150cc when using technetium or indium. As the heart enlarges the minimal detectable effusion goes up proportionally as demonstrated by Staab.[1]

Criteria for the Diagnosis of Pericardial Effusion (See Figure 1)

1. The ratio between the size of cardiac blood pool on the scan and the size of the cardiac silhouette on the radiograph equals less 0.80.
2. Separation of cardiac and hepatic blood pools on the scan.
3. Separation of cardiac and pulmonary blood pools on the scan (least reliable).

Pitfalls:

1. False-positive interpretation due to excessive scan contrast enhancement using the apparent size of the intracardiac blood pool.
2. False-positive interpretation due to apparent cardiac magnification resulting from supine chest film. Patient-tube distance less than 60 inches.
3. False-positive pericardial effusion interpretation because of thickened pericardium or myocardium.
4. False-positive interpretation due to superficial positioning of the scanner plane to focus.
5. False-negative interpretation with fluid accumulation of less than 150cc.

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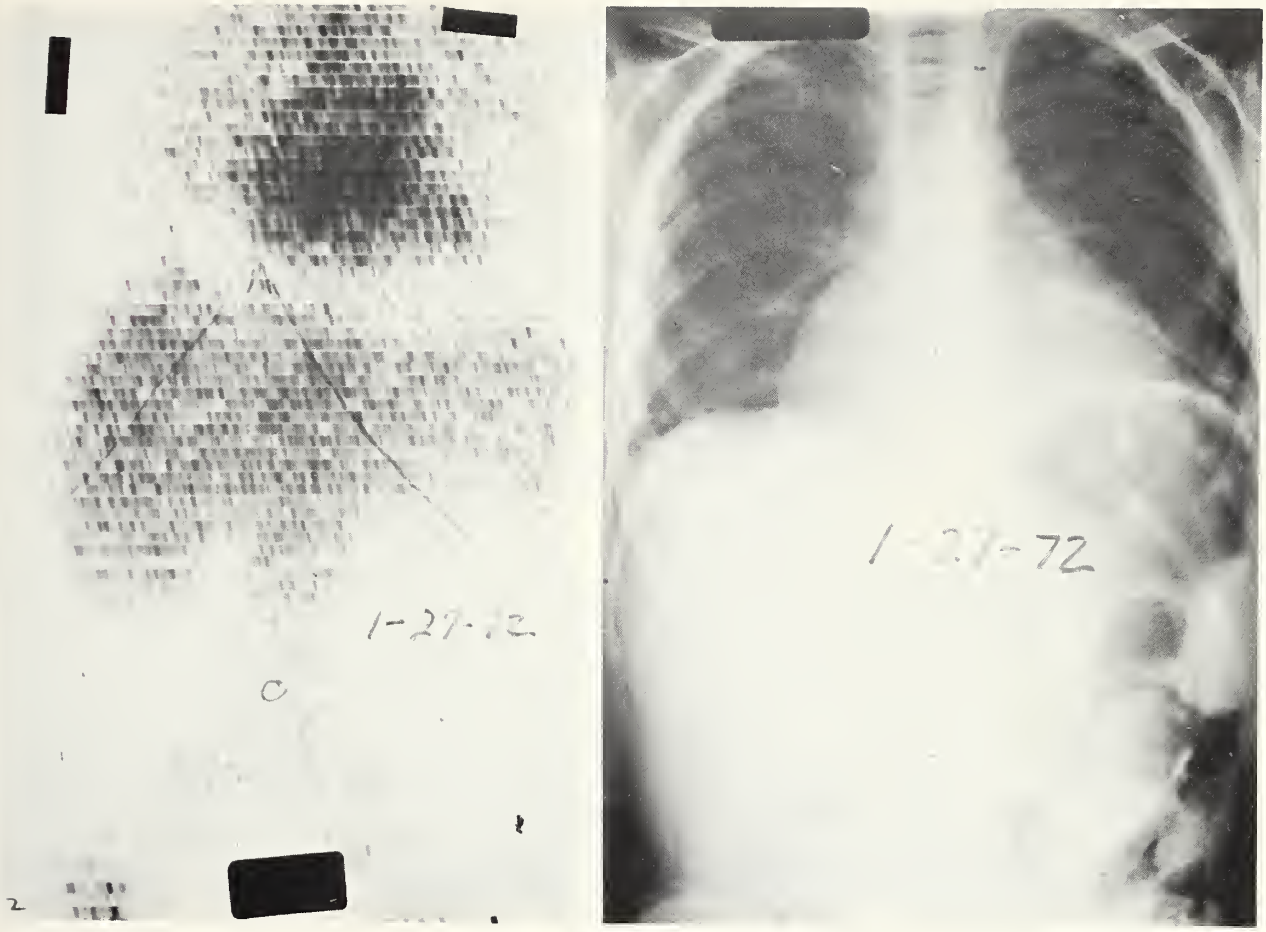

Figure 1

Film on a child with fever and shortness of breath revealed globular cardiomegaly. An Indium 113m cardiac blood pool evaluation reveals mild enlargement of the intracardiac blood pool and unusually widened space between the intracardiac blood pool and the liver. Fifty cc of purulent material were removed at a pericardial tap.

II. When the gamma camera is available, evaluation of the intracardiac blood pool can be obtained although the comparison to the transverse cardiac diameter on the radiograph is much more difficult. One must usually rely on the distance between the intracardiac blood pool of the liver and the lungs. A void around the heart is the most significant finding. However, one can obtain a transmission scan to give the cardiac outline on the same scale as the subsequent scintiphotos. The transmissions source consists of a flat disc containing 5 mc 99m Tc. The patient is positioned to include the heart, liver and both lungs.

The variable positioning of the gamma camera can be used to obtain different degrees of obliquity, which may reveal loculated effusion that might otherwise have been missed. For a dynamic radionuclide study the patient is injected under the gamma camera and the cardiopulmonary transit of the radionuclide bolus is monitored. In its simplest form serial scintiphotos are pulled every three seconds after the antecubital intravenous injection of the radionuclide. Views of the isotope in the right heart, the lungs and the left heart are easily obtained. The normal pulmonary transit time (approximately the time peak activity in the right ventricle to the peak activity in the left ventricle) in the adult is seven seconds plus or minus two seconds. Substantially increased cardiac transit time can be a reflection of congestive heart failure (see Figure 2). The gamma camera is equipped with a magnetic tape playback system which allows for selective of an area of interest. The study may be recorded on magnetic tape and replayed for the precise determination of the time at which the radioactivity appears in various chambers as the radionuclide traverses the cardiopulmonary course. When this equipment is available, the peak to peak transit time between the

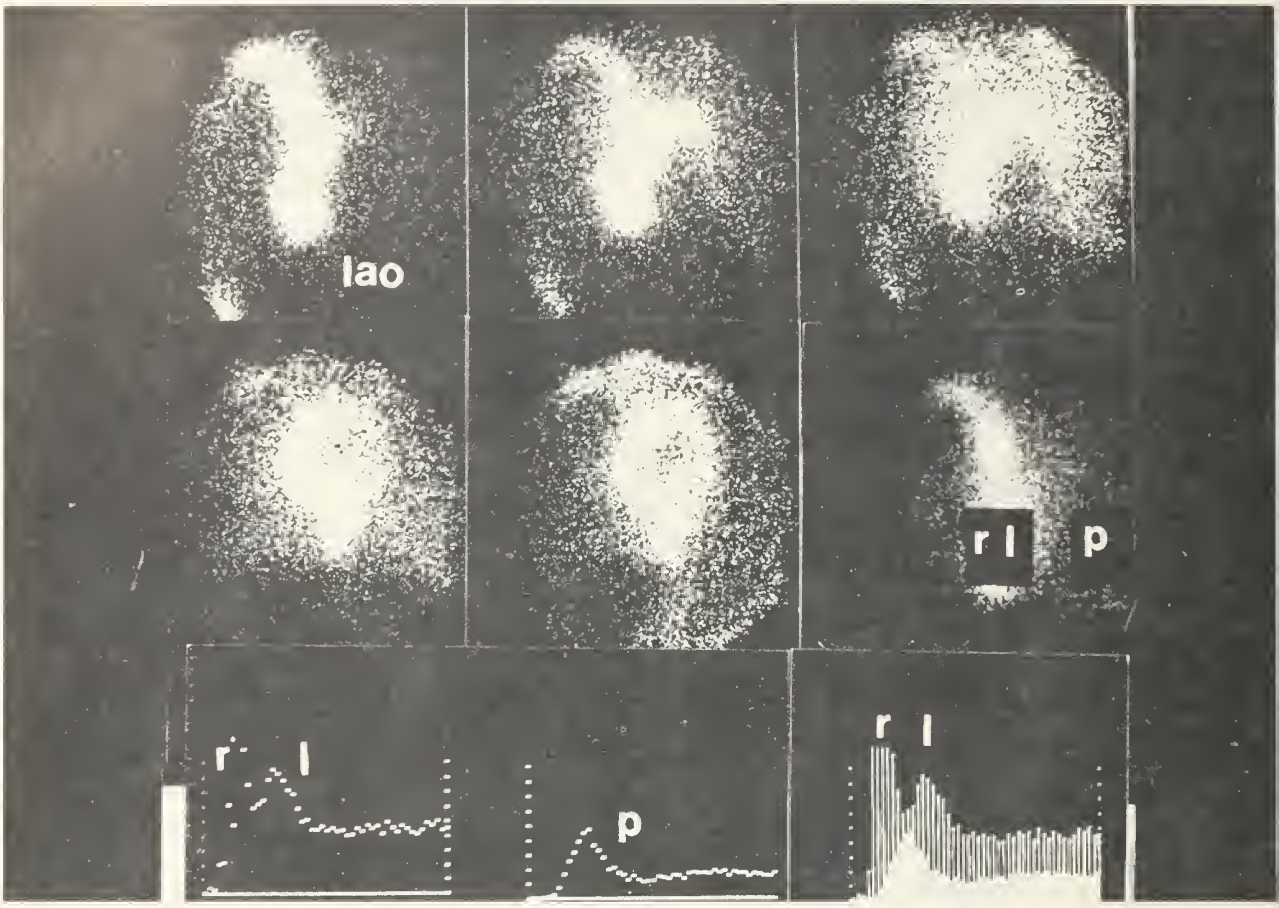

Figure 2

Radionuclide angiogram with a patient in the left anterio-oblique position following intravenous injection of 10 millicuries of technetium pertechnetate with rapid intravenous bolus in medial antecubital vein. Serial scintiphotos show the cardiopulmonary course of the isotope bolus. Note how the right side, pulmonary artery, lung fields, left side and aorta can be clearly distinguished. From areas of interested designated "rl" and "p" (the right and left ventricles and the lung), the transit of the bolus is graphically present, and the pulmonary transit time can be easily determined. For this normal study each data point for each graph is 0.8 seconds apart. The transit time is approximately 7 seconds.

ventricles is easily obtained. This also provides a valuable method for objectively determining efficacy of therapy for congestive heart failure. While the radionuclide technique lacks overall sensitivity for the measurement of pericardial effusion, its simplicity is an advantage and it complements other methods of evaluating cardiomegaly, such as positive contrast angiography, carbon dioxide angiography and ultrasound. With the continued advancement in radiopharmaceuticals and instrumentation, the sensitivity of this technique will improve. As the sensitivity and availability of both ultrasound and radionuclides increases, these two non-invasive techniques will be useful and complementary in the evaluation of cardiomegaly.

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Acute Spontaneous Abdominal Aorto-Caval Fistula

A Case Report

Edward J. Tracey, M.D., Henry J. Gloetzner, M.D. and Yoichi Katsube, M.D.

ABSTRACT—This case report describes a patient who initially exhibited acute cardiac failure unresponsive to medical therapy, then was found to have an aorto-caval fistula as a complication of an abdominal aortic aneurysm, the presence of which was suggested by a loud bruit which developed over the thorax and abdomen on the third day after admission. There was an associated large left renal cyst. Both were repaired surgically.

Introduction

Spontaneous rupture of an aortic aneurysm into the inferior vena cava is a rare complication of arteriosclerotic aneurysm. The first description of this condition was reported by Syme in 1831.[1] The first successful surgical repair was performed by Cooley in 1954,[2] which consisted of resection of the aortic aneurysm, aortic graft, and venorraphy. Since then 46 reported cases have undergone surgery with 28 successfully repaired. (60.8% success rate, including the present case.) The Baylor group has reported only four cases of spontaneous fistula among 1,400 surgical repairs for abdominal aortic aneurysms.[3] The University of Iowa has treated six patients with aorto-caval fistulas secondary to rupture of an abdominal aortic aneurysm over the past fifteen years. They represented 1% of all patients operated upon for abdominal aortic aneurysms and 4% of patients operated upon for ruptured aortic aneurysm.[4]

Case Report

A 73-year-old white male was admitted with the diagnosis of acute heart failure on January 14, 1973. One day prior to admission the patient developed shortness of breath and precordial palpitations with subsequent edema of the lower extremities, but with no complaint of abdominal or chest pain. During the past four years he occasionally had slight dyspnea, cough and edema of the legs, but did not exhibit these symptoms during the past six months.

Physical examination revealed a well developed male in acute distress, but quite cooperative and mentally clear. His temperature was 36.5°C., pulse rate 128/min., respiration 32/min., and blood pressure 160/70. Jugular veins were markedly distended. The chest diameter was increased antero-posteriorly. Moist rales were heard at the base of the lungs bilaterally. A grade III to IV soft ejection murmur was heard at the apex. The liver edge was palpable two finger breadths below the right costal margin and was not tender. A definite abdominal aortic aneurysm could not be outlined on palpation. There was marked pitting edema and venous engorgement of the lower half of the body. Femoral and popliteal pulses were palpable bilaterally. An electrocardiogram revealed regular sinus tachycardia and left ventricular hypertrophy. A chest roentgenogram revealed an enlarged heart and mild congestive change of the vascular trunks but no evidence of pleural effusion. CBC and urinalysis were normal. BUN 37, serum creatinine 1.6, LDH 202, SGOT 11, total protein 6.4, total bilirubin 0.5, electrolytes were normal, and VDRL was non-reactive.

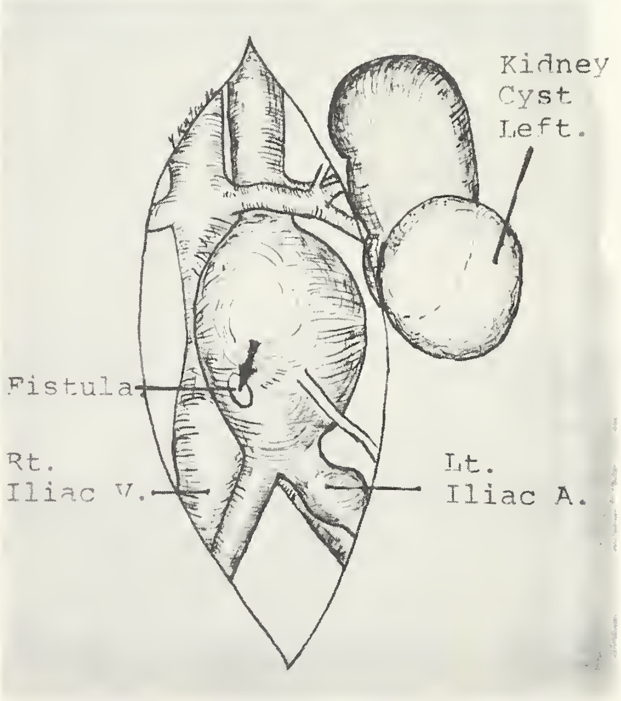

Figure 1 ·

Arteriosclerotic aneurysm of abdominal aorta with spontaneous rupture into inferior vena cava along with posterolateral aspect of aneurysm and large renal cyst left.

He was treated with bed rest, nasal oxygen, mild sedatives, diuretics, digitalis and salt restricted diet. On the following day his general condition was improved. On the third day he complained of epigastric distress and nausea. At midnight he suddenly developed deep abdominal pain and became diaphoretic. A loud bruit was heard over the posterior thorax and entire abdomen to the thighs. Femoral pulses were palpable bilaterally. Respiration gradually increased to 38/min. Pulse rate went up to 120/min. An electrocardiogram revealed no significant changes. An abdominal roentgenogram showed a minimally calcified abdominal aortic aneurysm measuring 8 centimeters in diameter. An intravenous pyelogram revealed a 7.5 centi-

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Dr. Yoichi Katsube died in an automobile accident on January 31, 1974.

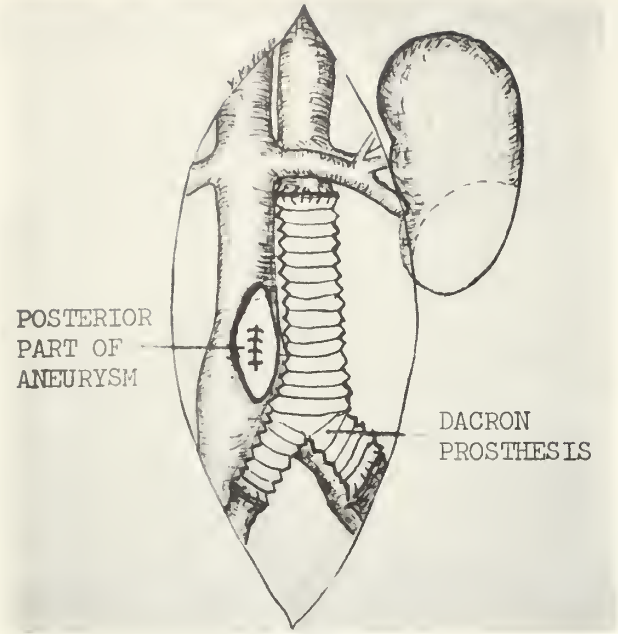

Figure 2

Completed operation. Vena cava was repaired from aneurysm side, aneurysm excised, and dacronbifurcation prosthesis inserted.

meter cystic lesion in the left kidney and some decrease in the concentration of the dye bilaterally. During the following two days until just before surgery his clinical condition was stable. On the 6th day he complained of abrupt onset of epigastric pain which radiated to the back and he became progressively dyspneic and tachypneic. Venous distension of the neck and lower extremities became extremely prominent. Blood pressure was 200/80, pulse 100/min., respiration 46/min., central venous pressure 22cm H2O. He underwent emergency laparotomy with the diagnosis of leaking aneurysm associated with an arteriovenus fistula. The aneurysm, situated below the renal arteries, measured 8 centimeters in diameter with an associated aneurysmal dilatation of left common iliac artery. No gross hematoma in the retroperitoneum was found though considerable venous congestion was observed. The left kidney was exposed and a clear cyst was unroofed and painted with absolute alcohol. (Figure 1) After the aorta was isolated by clamping above the aneurysm and across the iliac arteries below the aneurysm, it was incised along its anterior wall longitudinally. A large amount of venous bleeding was noted. There was a fistula 2 cm. in length on the right postero-lateral aorta to the left anteromedial portion of the vena cava at a level 3 cm. above the bifurcation of the aorta. This fistula was occluded by digital compression, then was oversewn from the aortic side with a running 4-0 prolene vascular suture. Remainder of the anterior aspect of the aneurysm was removed and 25 x 12.5 cm. woven dacron bifurcation prosthesis was inserted. (Figure 2) Central venous pressure came down from 22 to 9 cm. H2O. Blood pressure became 160/100, pulse 90/min. Jugular vein distension completely disappeared. He started massive diuresis just after the surgery which lasted for 5 days and averaged 3000 ml. daily. His postoperative course was uneventful except for occasional respiratory difficulty. He was discharged on the 17th postoperative day. One month after surgery chest roentgenogram revealed marked decrease in heart size and an EKG revealed normal sinus rhythm. One year after surgery the patient was quite well and had gained 10 Kg. in weight.

Discussion

Baker stated that correct preoperative diagnosis of aorto caval fistula was made in only one of their six cases.[4] It is often difficult to diagnose because typical signs and symptoms are not always present. Dickson reported that no murmur or bruit was audible in a patient who had a vertical, sharp edged fistula, measuring 3.0 x 0.5 cm. situated 2 cm. above the bifurcation.[5] The absence of a typical continuous murmur in certain patients may be related to varying degrees of inferior vena caval obstruction produced by the aneurysm.[3] Paradoxically the intensity of the bruit is not directly related to the size of the shunt, but about 80% of patients have bruits.

Spontaneous aorto-caval fistulas usually present an easily recognizable symptom complex consisting of a short history of high output cardiac failure manifested by tachycardia, pleural effusion, venous distension, peripheral edema, widened pulse pressure, abdominal pain, pulsating abdominal mass usually with continuous bruit and thrill, and often renal failure.

The significant change in the electrocardiogram is the sinus tachycardia with occasional ventricular premature contractions which usually return to a normal sinus rhythm within one month after surgery. Therefore, an electrocardiogram is of minor importance, except for eliminating the possibility of other cardiovascular pathology. Changes of right ventricular overload in a patient who suffers an acute abdominal catastrophe and is known to have an abdominal aneurysm should suggest the possibility of an aorto-caval fistula.[5]

Preoperative aortography is of diagnostic value, but need not be routinely performed if the diagnosis can be established without its aid. Baker stated that he would prefer immediate surgery and reserve aortography for patients with an obscure clinical picture.[4]

Generally speaking, patients lose 3 to 4 liters of urine per day for the first week postoperatively in spite of preoperative treatment. An increase in blood volume and of interstitial fluid in the form of edema is characteristic of an arteriovenous fistula. The mechanism of renal dysfunction is related to an increase in renal vein pressure and reduced renal parenchymal perfusion secondary to shunting of aortic blood into the inferior vena cava.[6 7 8] Therefore, throughout the surgical procedure, every effort must be made toward the prevention of over-transfusion, as these patients often have an abnormally elevated plasma volume associated with cardiac decompensation.

Conclusion

An aorto-caval fistula, if incurred as a result of trauma, is relatively benign and well tolerated for months to years. Spontaneous rupture of an aortic aneurysm into the inferior vena cava is a rare complication of arteriosclerotic aneurysms. It is a rapidly fatal lesion if the fistula develops rapidly and is of large diameter. Patients with small fistulas are more likely to develop intractable right heart failure. With the progressively increasing number of aged persons in our population, more arteriosclerotic aneurysms will be encountered and the possibility of a fistula into the inferior vena cava should be considered in those persons who develop intractable right sided cardiac failure associated with an abdominal aortic aneurysm.

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Chondrosarcoma of the Sternum

A Case Report

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ABSTRACT—A case of chondrosarcoma of the sternum, the second reported case since 1952 in the State of Connecticut, is presented emphasizing the pathological aspects of this rare neoplasm and a review of the recent American literature is made.

Introduction

Chondrosarcoma of the sternum is a rare tumor. The present case is the second reported case in the State of Connecticut during the twenty-year span of 1952 to 1972.

Case Report

H.G. (104825) a 71-year-old white woman, was admitted to the Danbury Hospital on August 20, 1972. She had noticed a mass in her right chest 4 years previous to her admission. Although she sought medical advice, no further diagnostic or therapeutic measures were undertaken. The mass has increased slowly in size since then. It has never been painful. She has noticed no weight loss, respiratory distress, anorexia, fever or malaise. Past history was not contributory.

Physical Examination

The blood pressure was 130/80; pulse 80/min., respiration 20/min., temperature 98°. A firm mass was noted protruding 3cm. anterior to the surface of the sternal manubrium at the junction of the right sterno-clavicular junction. The mass measured approximately 4 x 5.5cm. in diameter. The overlying skin was unremarkable. The mass was firmly attached to the deeper tissues, but the skin and subcutaneous tissue were freely moveable. The lungs were clear to auscultation and percussion. The remainder of the physical examination was negative. Laboratory data was unremarkable.

Roentgenograms of the chest disclosed diffuse osteoporosis of the regional skeleton with evidence of a destructive lesion in the manubrium bulging into the right upper hemithorax. All other thoracic bone structures were otherwise normal. Slight bronchial wall thickening in the left lung was noticed. The aorta was tortuous and dilated. Radiologically it was felt that the differential diagnosis included aneurysmal bone cyst and slow growing chondrosarcoma or fibrosarcoma.

IVP disclosed moderate caliectasis of the right kidney with suspected loss of renal parenchyma, possibly due to past infection or back pressure atrophy. There was no evidence of renal neoplasia. Bilateral mammography, barium enema and GI series were within normal limits.

On August 25, 1972, a biopsy of the lesion was performed. On exposure, the tumor was found to be well encapsulated and to be composed of cartilagenous material. A definitive histologic diagnosis could not be established because of the nature of the lesion and smallness of the sample. However, in view of the clinical history, the X-ray picture, age and location of the tumor, it was felt that the lesion was consistent with the diagnosis of low grade chondrosarcoma.

On August 29, 1972, the patient was scheduled for definitive treatment. The manubrium sterni together with the proximal portion of the first rib were excised. At the time of operation a small pneumothorax occurred which was promptly corrected.

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On the third post-operative day the chest tube was removed. The convalescence was uneventful except for a pneumonic process in the RLL with pleural effusion from which the patient recovered completely on appropriate treatment. She was discharged on September 9, 1972 to be followed at home. At the time of this report there is no evidence of recurrence or metastasis.

Pathology

The gross specimen consisted of the resected manubrium, the distal portion of the right clavicle and a fragment of the first rib. On sectioning (Figure 1) the entire manubrium was replaced by a lobulated, hard, whitish tumor which measured up to 4.0cm. in antero-posterior diameter, 5.5cm. in transverse diameter and 4.0cm. in vertical diameter. Grossly the sternoclavicular joint did not appear to be involved by tumor.

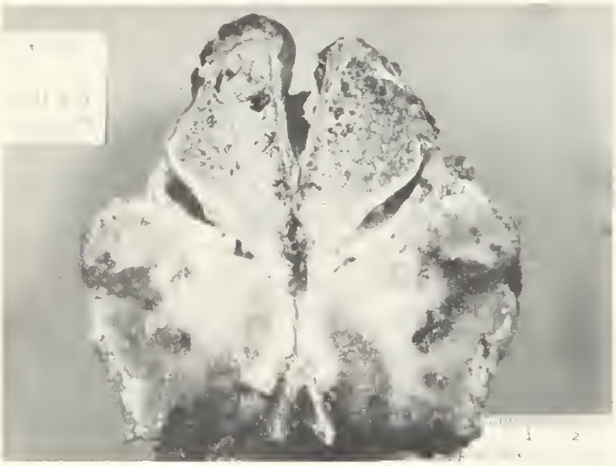

Figure 1

Cross-section revealing partial demarcation of the neoplasm, together with its variegated, ground-glass appearance.

Microscopically the tumor was composed for the most part of neoplastic hyaline cartilage. (Figures 2, 3, 4, 5, 6 and 7) In some areas the chondrocytes were plump and possessed 2 to 3 hyperchromatic nuclei (Figure 4). Scattered mitotic figures were observed. In areas the tumor showed myxomatous changes of the stroma and had a more anaplastic appearance. (Figure 5) The tumor eroded and extended through the cortical bone and the articular cartilage of the first rib. (Figures 2 and 3) The tumor invaded the sternocleidal joint, but not the clavicle itself. Sections from the skin and adjacent tissue did not show tumor invasion.

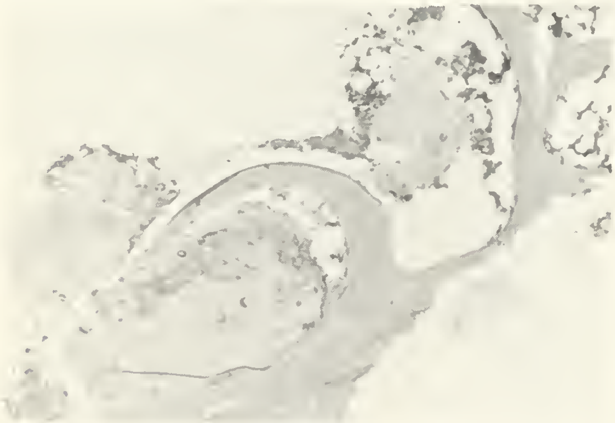

Figure 2

Low-power view, notice infiltration of the marrow spaces by tumor masses (H&E x 35).

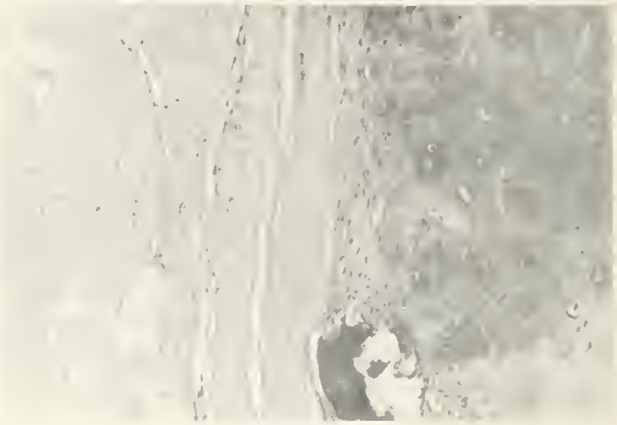

Figure 3

Microphotograph showing erosion of the tumor through the bony cortex into the soft tissues. (H&E x 100).

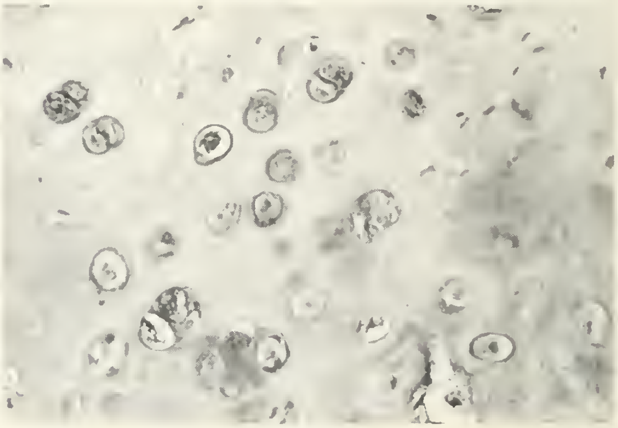

Figure 4

Closer view revealing nuclear atypism, mitotic figures, and abnormal lacunae. (H&E x 250).

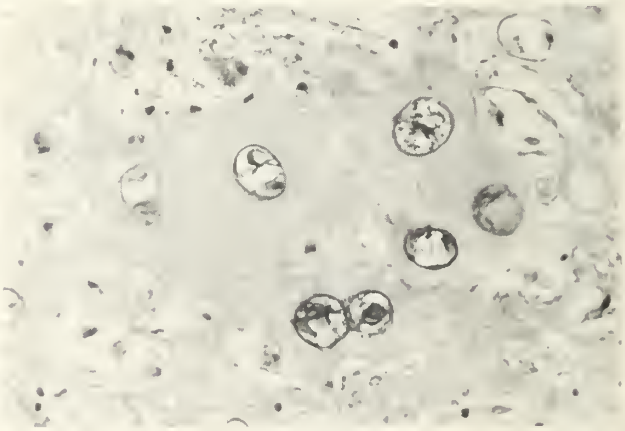

Figure 5

High-power view of a less differentiated area. Notice myxoid degeneration and bizarre nuclear features. (H&E x 400).

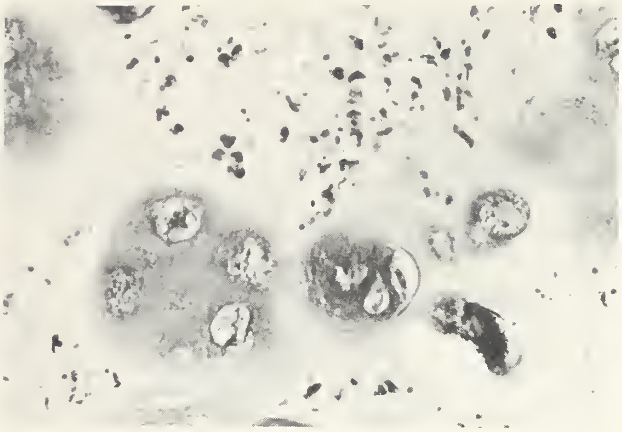

Figure 6

Site of previous biopsy, exhibiting viable tumor cells admixed with abundant acute inflammatory cells and nuclear debris. (H&E x 400).

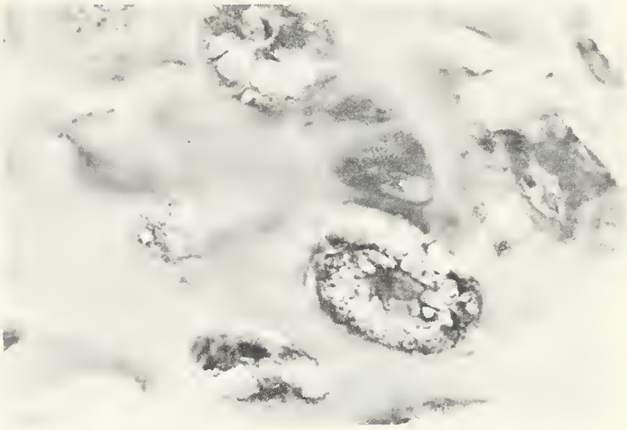

Figure 7

Another area of the tumor showing pronounced vacuolation of the cytoplasm adopting a soap bubble or foamy appearance. (H&E x 650).

Discussion

Although chondrosarcoma is said to be the most common of all malignant neoplasms of the sternum,[13] it is nevertheless a rare lesion. Review of the reported cases in the State of Connecticut Tumor Registry during the 20-year span between 1952 and 1972 disclosed that of 72 chondrosarcomas reported, only one arose in the sternum. Henderson et al[5] in a report of 288 cases of chondrosarcoma of bone found only 7 arising in the sternum. (2.4%).

They are usually encountered in patients in the 4th and 5th decade. However, there are 7 cases reported in the literature occurring in younger age groups.[3 9] There is a slight predominance of males over females.[1 2 5 6]

The tumor usually presents as slow growing, local swelling, often painless but in one-third of the cases, there is subsequent development of pain.[12] They grow by direct extensions and recur locally if incompletely removed. Infrequently they are highly malignant; in these cases they can metastasize, the lungs being the organs most frequently involved. Examination usually discloses a hard mass but it may occasionally be fluctuant. There is a high incidence of abnormal glucose tolerance tests in patients with chondrosarcoma.[8] Unfortunately in our patient, this test was not performed.

Proper histologic grading is of prognostic significance.[1 2 5 10 12] Chondrosarcomas are usually so well differentiated that they can be under-diagnosed; at times they present difficult histopathologic problems in this regard. Dahlin[1 2] has observed progressive dedifferentiation with increased malignant behavior following inadequate surgical treatment of these tumors. He emphasizes the need to have adequate surgical excision including a large margin of normal tissues. Data from his 33 cases clearly indicate that about 10% of low grade chondrosarcomas evolve into dedifferentiated highly malignant fibrosarcomas or osteogenic sarcoma. In contrast to the above about 71 per cent of patients who have had adequate resection have a life expectancy of five years.

Because of lack of uniformity in the degree of differentiation in these tumors, biopsy should be obtained from the most suspicious areas, which are sometimes indicated roentgenologically by more invasive appearance of the tumor. Likewise the pathologist should search the specimen thoroughly to obtain adequate samples for histologic evaluation.

Treatment

The treatment of choice is surgical excision. It should comprise a complete excision of the lesion with an adequate margin of normal tissue. There are different techniques for repair of the surgical defect.[7 10 12] Discussion of these techniques is beyond the scope of this paper. Radiation therapy has no apparent value in the cases reviewed.[1 2 5 6 10]

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Gold Induced Thrombocytopenic Purpura

Robert M. Rosa, M.D. and Siegfried J Kra, M.D.

ABSTRACT—Thrombocytopenic purpura is a rare but often fatal complication of the treatment of rheumatoid arthritis with gold. The two cases described, and a review of the literature, provide evidence of different mechanisms, possibly immunologically mediated, as the cause of this disorder and emphasize the difficulties encountered in assessing response to therapy. Despite this complexity and the fact that not all patients exhibit a successful response, experience to date suggests that immediate therapy with dimercaprol (BAL) and steroids is indicated in this disorder.

Introduction

Gold therapy, although potentially toxic, is effective in treating many patients with rheumatoid arthritis.[1] Thrombocytopenic purpura may complicate the management of certain patients and at times, may be life-threatening. With repeated utilization of gold therapy, it is anticipated that gold-induced thrombocytopenic purpura will continue to occur. We describe below the treatment of this disorder with dimercaprol (BAL) and prednisone, discuss the pathogenic mechanisms that may be involved, and consider the difficulties in evaluating response to therapy.

Case Reports

No. 1. (A.A.) is a 52-year-old secretary who had a two-year history of joint pains accompanied by three hour early morning stiffness, swollen proximal interphalangeal joints of the hands, and ulnar deviations. Radiographic findings were consistent with rheumatoid arthritis as was a positive rheumatoid factor (1:5,000) and negative L.E. preps. The patient's disease had been poorly controlled with salicylate therapy. Weekly injections of 50mg of Myochrysine (gold sodium thiomalate) was started on June 6, 1970. A total of 150mg of gold was administered, by June 30, 1970, when it was discontinued because of the development of an oral canker. Complete blood and platelet counts at that time were normal. Gold therapy was reinstituted on July 31, 1970 and by September 26, 1970, the patient had received a total of 550mg. On September 28, 1970, dental cleaning of her teeth produced marked gingival hemorrhaging followed one day later by petecchiae, ecchymosis, purpura, epistaxis, and hematuria. A platelet count was 1500/mm^3 with a hematocrit of 34%, hemoglobin of 10.4 grams, normal white count, and a reticulocyte count of 2.6%. Prothrombin time and partial thromboplastin time were normal. The patient was admitted to Yale-New Haven Hospital. Bone marrow aspiration revealed increased megakaryocytes, normal myeloid-to-erythroid ratio, and normal iron stores.

An initial dose of 60mg of prednisone was given per day, and platelet transfusions were made. Transfused platelet survival was quite good with the count rising from 8000/mm^3 to 60,000/mm^3, 24 hours after administration of eight units of platelets. Red blood cell survival with Cr^{51} demonstrated a half-life of 14 days (normally 28 days), and liver-spleen scan revealed a normal sized spleen but a shift of colloid producing a spleen-to-liver ratio of 2:1. Anti-nuclear factor, L.E. prep and rheumatoid factor (1: 10,000) were all positive. A direct Coombs test was only weakly positive (negative with anti-8), while four subsequent L.E. preps were negative after prednisone was given. The prednisone dosage was raised to 100mg per day. Dimercaprol (BAL), 100mg I.M. every eight hours, was begun on the fourth hospital day because of persistent thrombocytopenia. After five days, dimercaprol was increased to 150mg every eight hours, and within 24 hours the platelet count rose dramatically. Dimercaprol was discontinued on the 13th day after a total dosage of only 2750mg, while prednisone was tapered to 45mg per day by the time of hospital discharge. At that time, the patient's platelet count was 270,000/mm^3, and has remained normal in the subsequent two years. The patient's rheumatoid disease has remained active and is managed with salicylates and intermittent intra-articular injections.

No. 2. (E.E.) is a 57-year-old housewife with a three-year history of joint pains and a positive rheumatoid factor in high titers. A biopsied joint of a toe revealed chronically inflamed synovial tissue consistent with rheumatoid arthritis. Gold (Myochrysine) and salicylate therapy was begun on October 10, 1970. On December 24, 1970, gold injections were discontinued after a total dosage of 575mg because the patient complained of

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DR. ROBERT M. ROSA, now with the United States Naval Reserve Medical Corps. DR. SIEGFRIED J. KRA, Assistant Clinical Professor, Yale University School of Medicine.

a "sweet taste" in her mouth. On December 31, 1970, ecchymoses and purpura developed, and a platelet count was 20,000/mm^3. When the patient was admitted to Yale-New Haven Hospital, the platelet count was repeated, showing only 17,000/mm^3 with a hematocrit of 37%, white blood count of 3400/mm^3 with a normal differential, reticulocyte count of 0.2%, and a normal prothrombin and partial thromboplastin time. Bone marrow aspiration and biopsy showed a hypocellular marrow with only one megakaryocyte, absent red cell precursors, and increased lymphoid precursors, which seemed to indicate a hypoplastic, pancytopenic reaction. The patient was given prednisone, 100mg per day, and platelet transfusions were begun. Rheumatoid factor, anti-nuclear factor, and L.E. prep, obtained after prednisone was started, were all negative. Despite an excellent initial response to ten units of platelets, the patient's platelet level gradually declined, ecchymoses continued to appear, and subsequent platelet transfusions did not elevate the platelet count significantly.

Dimercaprol was prescribed on the seventh day, 150mg I.M. every six hours, and was reduced to every 12 hours on the 11th day. On the 13th day, the platelet count fell to 13,000/mm^3, but rose to 40,000/mm^3 on the 16th day with a cessation of all bleeding. This was ten days after the introduction of Dimercaprol. The hematocrit remained in the range of 32% to 34% with a white count of 3,000. Although the patient's platelet count fell to 20,000/mm^3 by the time of her discharge from the hospital, she remained clinically well and a repeat marrow examination showed a modest increase in megakaryocytes and red cell precursors. Dimercaprol was discontinued after a total dosage of 4950mg, while prednisone was tapered during the next few weeks as the platelet count quickly rose to 50,000/mm^3. In the 20 months since her discharge, the patient has responded well with only salicylate therapy. Complete blood counts are normal, and her platelet count remains about 150,000/mm^3.

Discussion

Toxic reactions to gold therapy have been reported in 50% of children and between 40% and 50%[2] of adults. Most reactions consist of pruritis, a metallic taste in the mouth, mild forms of dermatitis, stomatitis, and nonspecific gastrointestinal symptoms. Jaundice, exfoliative dermatitis, the nephrotic syndrome, neurologic disturbances, and severe hematologic complications are less common. The incidence of thrombocytopenic purpura has been reported between 1% and 3%.[3 4 5]

The pathogenesis of the hematologic toxicity of gold, like the mechanism of its efficacy in rheumatoid arthritis, has remained unclear. A careful review of the literature, however, reveals two general explanations for gold-induced thrombocytopenic purpura. The first suggests some form of primary marrow toxicity, usually associated with an aplastic or amegakaryocytic marrow,[6] hyaline degeneration of the megakaryocytes, or decreased platelet budding. Some authors contend that this picture might indicate a direct toxic effect of gold on the marrow.[7] Saphir and Ney, however, describe a patient who developed thrombocytopenic purpura several months after receiving only 50mg of gold. This toxicity is not directly related to dosage or duration of therapy, and in some cases, may represent an idiosyncratic marrow reaction. In this context, Denman and Denman postulated an immunologically determined hypersensitivity mechanism, possibly directed at the marrow cells, based on the *in vitro* blast transformation of lymphocytes of patients with severe gold-induced hematologic toxicity when challenged by Myochrisine.

The second explanation is that the destruction of platelets often occurs peripherally either by hypersplenism[8] or by specific anti-platelet antibodies[9] possibly induced by a gold-hapten formation. This pathogenesis is supported by reports of normal marrows[10] or increased megakaryocytes, splenomegaly with recovery after splenectomy, or by a shortened platelet life span using Cr-labeling. Unfortunately, attempts at demonstrating such antibodies have been unsuccessful. Inevitably, the uncertain pathogenesis of gold-induced thrombocytopenia has encouraged a myriad of therapeutic regimens, which, in addition to platelet transfusions and an occasional splenectomy, includes the use of Vitamins (C, B1, K, and folate), testosterone, steroids and ACTH,[11] and the "chelating agent" dimercaprol (BAL).

Although dimercaprol is used fairly often in treating gold toxicity, there are only 13 well documented reports of its specific use in treating thrombocytopenic purpura,[12] only eight of these cases were successful. Support of dimercaprol is strenghtened by reports of decrease in serum gold and increase in urine gold concentrations following its use. Even more important are three instances in which discontinued use of dimercaprol resulted in lowered platelet counts restored only after dimercaprol was reinstituted. Yet, the mechanism of action of dimercaprol in this condition remains unclear. It seems unlikely that enough gold was chelated and excreted to account for its success in each of the reported cases. It is conceivable, that dimercaprol could alter the configuration of a gold-hapten, thereby losing its antigenic potential. In addition, it should be noted that almost all of the patients responding to dimercaprol also received either steroids or ACTH which might have suppressed the hypothesized immunologic response. Reports of success with steroid treatment alone, are rare.[13]

Because of the possibility of an immunologically mediated hypersensitivity or antibody phenomenon, both patients described here were treated initially with high dosages of prednisone. No clinical improvement occurred until dimercaprol was introduced. These patients seem to represent the two proposed mechanisms of gold-induced thrombocytopenic purpura. Case No. 1 showed increased megakaryocytes and a splenic activity, suggesting increasing peripheral platelet destruction. The patient responded well six days after dimercaprol was instituted. Case No. 2, who showed a hypoplastic marrow, was more consistent with some form of primary marrow toxicity. This patient responded poorly to therapy and showed a marked delay in the permanent elevation of the platelet count. Subsequent recovery may have been spontaneous, as in the case reported by Thompson *et al,* in which bleeding stopped relatively quickly after dimercaprol was administered. Unfortunately, we were unable to assay for anti-platelet antibodies in either case. Several factors prevent conclusiveness at this time.

It would appear that more than one mechanism is responsible for gold-induced thrombocytopenic purpura. Not all patients will respond to dimercaprol. Furthermore, evaluating a successful response to therapy is clouded by the possibility of spontaneous recovery and/or the simultaneous use of steroids. Nevertheless, reports of the successful use of dimercaprol, usually with concommitant steroid therapy, are increasing and have been reported in both of the above proposed mechanisms of gold-induced thrombocytopenia.[10] It is our opinion, therefore, that until the nature of this disorder is more fully elucidated immediate therapy with both dimercaprol and steroids is indicated.

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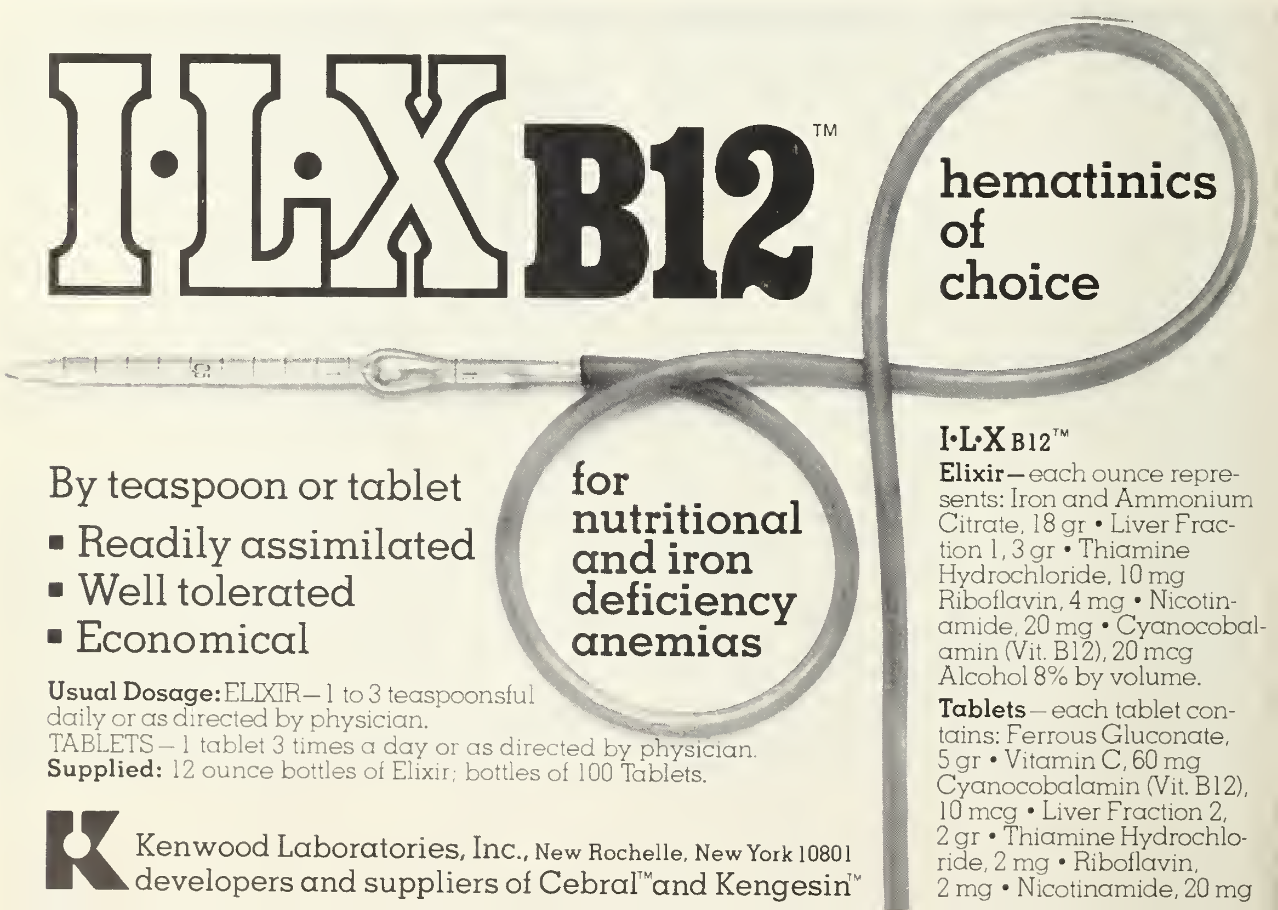

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The President's Page

Past images in the eyes of the viewer tend to be more powerful than signs of change. The membership of the AMA tends to reflect this hypothesis.

Until a few years ago the AMA has had the image of rushing to wait to react. It showed little sign of striving for innovative change and thereby fell behind the changes emerging from the socio-economic revolution which has engulfed us all. Its efforts seemed to be focused entirely on preserving intact medicine as it has been over the last several decades.

But the AMA is changing and deserves a better image now. In Connecticut the membership of the state medical society hovers around four thousand. Of those about twenty-four hundred are members of the AMA. We should do better. The present AMA needs and deserves our support.

Space does not permit an entire listing of all the things the AMA does for its membership but representative examples are in order.

In the clinical field, efforts forwarding the cause of continuing medical education are predominant. At both meetings of the AMA each year clinical courses are given. Efforts are being made now to bring some of these courses to the geographical area of the practicing physician. The JAMA is a clinical journal. The specialty sections of the AMA continue to emphasize continuing medical education and have their own publications paid for by the AMA. AMA committees are working continuously for the promotion of and updating of continuing medical education and planning ways to meet the growing problem of relicensure.

In the non-clinical fields, there is also a growing effort to stay abreast of and ahead of the times. Every year there is a conference on the socio-economics of medicine. During the last year many PSRO conferences were held. Leadership conferences are held in several areas each year. Conferences on medico-ethical and medico-legal problems are held. Washington offices are maintained to observe and to work for or against medical legislation and rules and regulations. There are conferences on ecology and environmental problems.

The AMA maintains a liaison with government and national agencies and is working for our interests in these fields.

The AMA stands as a resource center for state and county societies that need help in medico-ethical and medico-legal problems. It is trying to deal with PSRO, Medicare and Medicaid at a national level.

Soon national health insurance will be the burning issue. None of us know yet what the final compromise bill will look like. Much input from the AMA has gone and is going into this matter. Before, during and after the passage of some such bill we shall need all of the input we can get at all levels to preserve those parts of the practice of medicine which are sacred to us. Don't let the government divide us and, therefore, conquer us as they did in Canada.

Connecticut is not as yet one of those states which insists that its members belong to the AMA; but the AMA needs us and we need the AMA. Therefore, I hope that those of you who have not chosen to join will reconsider. We need a strong membership at all levels of organized medicine to cope with present and future problems.

James H. Root, Jr., M.D.
President

MEDI-SCAN Q&A

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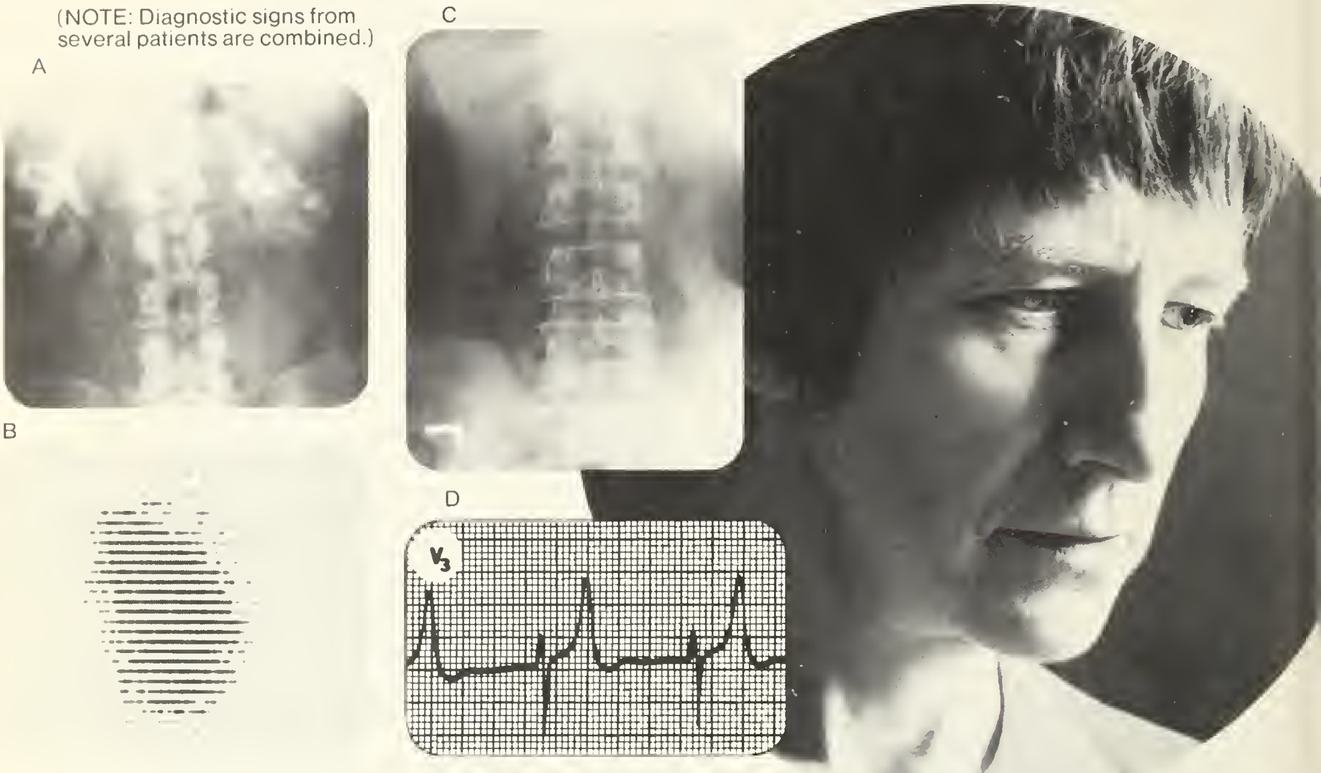

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The new programs are:

Yale University Medical School comprehensive cancer center program, New Haven, Conn.

Georgetown University-Howard University comprehensive cancer program, Washington, D.C.

Illinois Cancer Council comprehensive cancer program, Chicago. This includes representation from seven universities, Veterans Administration hospitals, the Chicago College of Osteopathic Medicine, the Illinois Department of Public Health, the Illinois State Medical Society and the American Cancer Society, Illinois Division, Inc.

The Colorado Regional Cancer Center, Denver. This includes representation from the University of Colorado, Colorado State University and the Denver Children's Hospital.

Nine other comprehensive center programs already have been established by NCI.

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Connecticut Medicine

Editorials

Has a Decade Made a Difference?

On a bright May morning in 1962 I set off to do something new—attend the annual meeting of my state medical society. I had never seen any reason to attend before, but neither had the medical school I was associated with at that time exhorted me to defend my rights as it did then. A move to link membership in the Massachusetts Medical Society with the reactionary AMA was afoot—and I certainly did not want *that* to happen!

The debacle I witnessed and the chain of thought it set off are described in the paper republished in this issue of *Connecticut Medicine.* Like Paul on the road to Damascus, I went to oppose and became a convert. I realized that the AMA reflects the quality of its constituency. It can be no better, or no worse.

Are the conclusions I drew ten years ago still valid? Today 1964 seems terribly distant. Kerr-Mills and King-Anderson are forgotten; Medicare, Medicaid, PSROs and NHI were unknown terms then. All medical schools held themselves aloof in those days; now every school is reaching into its community and the bond of common interest between academia and practicing physicians is strong. The "town-gown" controversy has all but disappeared in a cloud of universal concern over excessive specialization and a dire shortage of family doctors. (Who could have predicted that primary care would someday be the theme of an annual meeting of the Association of American Medical Colleges!) The Third Force I described in 1964 still exists, but I realize now that it is not so much a geographic entity as a state of mind—a willingness to recognize the health care needs of the nation and to accept change to meet these needs. Doctors with this broad view are not uncommon now in academia and in what was once the "old guard" of organized medicine—and there are some doctors on community hospital staffs who are guilty of the reactionary views or the intellectual arrogance I once attributed to the other two forces. One can no longer say that only an exceptional scientific leader devotes himself to his local or state medical society or to the AMA. The AMA is hardly a liberal organization, but a strong liberal minority has tempered the reflex conservatism that once characterized every AMA action. This year the liberal candidate for its presidency lost by a single vote in the House of Delegates.

But some things I saw in 1964 have not changed. Medicine's loss of control over its own destiny has been eroded further, and if medicine is to avoid becoming government's pawn some voice in the private sector must speak for the entire profession. The AMA is still that voice. The American Hospital Association speaks loudly for hospitals. The Association of American Medical Colleges has moved its headquarters to Washington and has become a powerful lobby for the medical schools and some teaching hospitals. The American Public Health Association has not developed into the spokesman for medicine that I thought it might ten years ago. To paraphrase Voltaire, if the AMA did not exist, it would be necessary to invent it. For better or for worse, the AMA is the only voice that speaks for all of us.

In 1974, as in 1964, every physician has a choice between standing aside and scoffing or of getting in and acting; a choice between succumbing to change or guiding change. Which shall it be? The eleventh hour I feared we had reached in 1964 may be nearer now, but leadership in American medicine is still, thank God, a matter of personal responsibility.

John Gordon Freymann, M.D.
Hartford Hospital

The Journal—A Time for Appraisal

It was two years ago this month that the Council appointed me Editor of *Connecticut Medicine.* At the 1973 spring meeting of the House of Delegates, I asked for two years before evaluating my new direction for the Journal. Although I have more ideas that I believe would improve it, sufficient time has elapsed for a judgment. This is for the House and Council to make, acting for the membership. It is their Journal.

Accordingly, I am publishing (on pages 601-602) in this issue of *Connecticut Medicine* my report to the House at its 1974 spring meeting. I hope that the members will read it. In my first editorial, in March 1973, I said, "I shall broaden the scope of its contents to include not only articles of scientific medicine, but in the many and increasing fields related to medicine. . . . It is my hope to make it educational, informative, interesting, and readable." These still are my goals.

As my report states, the Journal is divided into three sections, (1) scientific, (2) articles related to medicine such as law, ethics, legislation, history, socio-economics, etc. and (3) Society affairs. Most of the Society section has been mandated by the Council. Its components stand on their own for quality and interest. I do believe, however, that state medical issues and news can and should be a more important part of the Journal, so I hope to broaden it, without conflicting with *Connecticut M.D.* or the Executive Director's Newsletter.

I wish I could say that the changes were always smoothly made and without contention, but this is not the general nature of change. I was most concerned about the Editorial Board, with its responsibility for quality. Although all the members were skeptical about the new direction, I am happy to say that, without a formal vote, its Board members unanimously approve the present direction. This does not imply that they, or I, think there is no room for further improvement. At the last meeting the Board approved the suggestion of one member, that a questionnaire be sent out to each member of the Society asking for suggestions and opinions. It awaits approval of the Council, especially as to cost.

The time has come for the Council and House of Delegates to determine whether or not it wants a Journal whose standards of quality are the highest— in research, writing, editing and production. This last is important because the quality of a journal varies directly in relation to the amount of financial support it receives. Whether or not *Connecticut Medicine* is to receive adequate support to pursue goals worthy of its membership is up to the membership to decide.

Fred Fabro, M.D.

Troublesome Implications

It's distressing but not very surprising to be reminded again that Indians suffer the worst health problems of all Americans. Statistics recently made available to The Washington Post by the Senate Permanent Investigations Subcommittee show that Indians have by far the highest incidences of tuberculosis, hepatitis, dysentery and infant deaths. You name it and it's a good bet that Indians suffer from it more than most.

What makes this all the more discouraging is that the health of the American Indian, unlike that of any other distinct racial or cultural group in the U.S., is the direct responsibility of the federal government. The implications of the fact are worth pondering.

In fairness, it needs to be noted that Indian health problems are unique in several ways. On large reservations with many scattered settlements, Indian Health Service hospitals and clinics are necessarily inaccessible to many people who lack basic means of transportation. Moreover, it isn't always easy to convince Indians to seek medical care even when they can get to one of the 51 IHS hospitals or more than 300 clinics.

But once they get there, Indians are more likely than not to enter inadequate facilities manned by overworked doctors and nurses. A two-year study of IHS found that only 22 of its 51 hospitals meet minimum accreditation standards, that only 16 of them meet national fire and safety codes, that 19 should be replaced and 14 extensively modernized at a cost of $200 million. Yet IHS appropriations for fiscal 1973 totaled only $217 million—for construction as well as for treating the estimated 488,000 reservation Indians in 23 states and Alaska.

While the military draft was in effect, doctors could choose between a two-year hitch on the reservation or two years in the armed forces. An estimated 75% of IHS's physicians during this time were draftees. At that, Indians often complained about the rapid turnover of doctors. But even that high turnover, with new draftees replacing physicians whose term had expired, was the epitome of luxury compared with the doctor shortage that confronts Indian health now that the two-year medical terms have ended. Several proposals to attract more doctors to a career in Indian health, by paying them bonuses of one sort or another, have so far failed to get out of Congress.

Those who favor a federal health program would do well to examine the Indian Health Service carefully, even though the problems of a national program would dwarf those of the limited IHS effort. It's true enough that IHS is under-financed, but given economic reality any but a bare-bones national health program would inevitably be similarly under-financed, understaffed and inadequate. Moreover, lack of money alone is not sufficient to explain the abysmal Indian health statistics or the dismal record of the government's fling with a federal health program.

The principal reason for that failure lies elsewhere, bound up with the limitations inherent in trying to solve complex social problems with political formulas. This failure of the federal government to adequately treat the health needs of fewer than a half-million Indians inspires little confidence that it would do any better job treating the health needs of more than 200 million other Americans.

Reprinted from The Wall Street Journal.

Reflections From The Dean's Office

Robert U. Massey, M.D.

The specific objectives of an academic health center need not reflect in every detail the national health policy, whatever that may turn out to be, but should be something like it. Clearly one of the national goals is to control the rising costs of health services without sacrificing either quality or acceptability. To accomplish this, we shall need more knowledge than we presently have about the nature of disease; enough knowledge to be able in most instances to prevent it. Caring for patients without curing them is expensive and will grow in cost faster than the rate of inflation. Preventing or curing disease will become cheaper, like computer services. Hence, support of creative research is the best investment of the health dollar.

Patient education should prove to be an almost equally good investment. At hearings before the Health Subcommittee of the House of Representatives last winter, Dr. Kerr White of Johns Hopkins School of Hygiene and Public Health listed seven priority items for national health spending. Patient education was ranked first "since health is largely an individual matter and personal responsibility."

The theme of the 85th Annual Meeting of the Association of American Colleges this month is "Educating the Public about Health." Last year, the American Association of Medical Clinics devoted an entire day to patient education.

Lewis Thomas in "The Lives of a Cell"[1] suggests that the system of medical care may be overused and improperly used. "The great secret," he writes, "known to internists and learned early in marriage by internists' wives, but still hidden from the general public, is that most things get better by themselves. Most things, in fact, are better by morning."

Minor illnesses clearly take most of the time of those physicians who provide primary medical care. Respiratory diseases account for over half of all episodes of illness in this country. John Fry, a British general practitioner, reviewed the morbidity experiences of 2500 patients in his practice. Two thirds of the illnesses were minor.[2]

Minor illnesses are usually incurable and self-limited. They are rarely harbingers of serious, life threatening disease. They respond to simple treatment of symptoms which informed adults can provide for themselves or their families. Patients should know what physicians cannot do, or should not be asked to do. Lawyers are too expensive to be consulted for a parking violation. Physicians are too expensive to be consulted for the common cold.

If patients' anxieties could be relieved by reliable knowledge about these matters, they would know that their health is secure in their own hands, not threatened by the ordinary ills to which we all are heir.

Many serious illnesses are preventable, but only if we individually or collectively get our priorities right and use the knowledge we have. Preventing illness does not mean being obsessed with health as the only worthwhile goal. Like happiness, it may be achieved most often by indirection. Some tragedies could be prevented by paying attention to immunization records. Others, requiring public education and better policing of the environment, may be more difficult to prevent. We know enough in most instances to make trying worthwhile; it would be far cheaper than building more coronary care units or high voltage radiation centers.

Patient education should begin in early childhood under the guidance of enlightened parents, and continue in the schools with enlightened teachers. Ideally health education would proceed unobtrusively throughout life.

I have known ranchers who, with their families and hired hands, lived 50 to 100 miles from a physician. One or two phone calls during the year took care of the medical needs of a score of human beings. Health education made this possible. Medical schools, hospitals, physicians and other health professionals should take the lead in designing an educational scheme for a lifetime of learning in health; how to prevent disease; how to use the system effectively.

ROBERT U. MASSEY, M.D., Dean and Professor of Medicine, University of Connecticut, School of Medicine, Farmington, Connecticut.

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EDITORIAL COMMITTEE OF CONNECTICUT MEDICINE

Chairman: J. Alfred Fabro
Number of Members: 15
Number of Meetings: 4

Editors encourage brevity, but sometimes it is necessary for a report to be longer. This is in that category because it summarizes a transition period that could be of interest to future editors. Also, I would like the delegates to be as informed as possible about the Journal.

It is the nature of a medical journal to take quite a bit of time for change because of its backlog of future commitments. I feel, however, that I have reached a format in the last three issues (January, February, March) that can be developed into an "educational, informative, interesting, and readable journal" of which the Society can be proud.

It is roughly divided into three sections: (1) scientific (2) special articles related to medicine (3) Society affairs. It averages about 64 pages, 12 being allotted to the basic subject in the Journal: scientific articles (12,000 words for three or four articles). I am beginning to receive more and better articles which is satisfying because a journal develops a momentum on the basis of its past performance for better or worse.

(2) Special articles: This is where I have the most leeway and control. They are related to medicine with a hopefully interesting, medically oriented content relevant to the broad interest of our members. I am quite pleased with this section, which seems unique among state journals.

(3) Society affairs: As I have said repeatedly, the Journal is a state journal which should inform the members of the Society especially about state affairs, without conflicting with *Connecticut MD*. It should, however, be of high quality and as readable as the rest of the Journal. One does not measure the quality of a Journal by one or two sections, but by the entire editorial content, which means from cover to cover. Even ads are included in this; poor taste in ads can lower the quality. And the Editorial Board has the responsibility for the overall quality, not only for scientific content, but the whole Journal. (More about this later.)

I am happy to report that recently Franz Ingelfinger, Editor of the *New England Journal of Medicine* and certainly one of the several best editors in the country and Mr. Robert F. Edwards, Managing Editor of *California Medicine* (now *The Western Journal of Medicine*), to me the best state medical journal, have commended in letters the quality and improvement in the Journal. (I don't consider *NEJM* a state journal.) The Editorial Board and I are, of course, happy about this, but if I became swellheaded about their comments, it was soon deflated by the results of two informal questionnaires formulated and collected by one of the members of the Editorial Board from members of his hospital staff, one of the best medium-sized community hospitals in the state. Several had not recognized any change; several did not even know there had been a change of editor; several others do not even open the Journal. I am not discouraged about this (in fact, it gives us greater room to measure improvement). Counterbalancing this has been the reaction of the Editoral Board. When I first explained to the members about a new direction, everyone was skeptical, but each was willing to give it a try before evaluation. Several months later, one of the most capable, longest-tenured members resigned, stating as his reason that the scientific section was being encroached upon too much. Several months ago another member of long tenure, distinguished in his field, resigned because of his own workload. He gave me friendly advice: Don't permit the space for the scientific content of the Journal to be compromised by Society affairs and thereby sacrifice an excellence of the Journal built up over years by Dr. Nahum. This in particular stimulated me to review, as accurately as is possible, the space devoted to Society affairs during the last year, something I had not heard about while on the Editorial Board or since being Editor.

I was more than surprised, amazed, at how much space it actually occupies. Society business in the Journal includes Council Minutes, Woman's Auxiliary Page, The President's Page, Obituaries, In Memoriam, Physicians' Placement Ads, Programs and Proceedings of the House of Delegates and of the Scientific Section, Officers' Page, and special messages and reports. Of the total year's 768 pages (64 pages per issue x 12 months) about 125 pages were for the Society. The scientific section is about 12 pages x 12 months = 144 pages. If I were to include from 1972 the Physicians' Placement Service, averaging about 3½ pages per issue x 12 = 42 pages, this would make the total society space about 167 + 42 = 209 pages of the total 768. If we premise that *Connecticut Medicine* is basically a scientific journal, and we always have, then this space is proportionately much too much. Can anything be done about it? I believe that it can, requiring, however, the support of the Council because this means invading territorial imperatives and disturbing traditional prerogatives.

For example, last year the preliminary program for the scientific meeting was three pages in one issue; then ten pages were used in the next issue for the complete program. Though we were able this year to condense the program from ten into about six and a half pages, this is still too many, especially with increasing printing and paper cost. The *NEJM*, our model for excellence, devoted two pages for its annual scientific program.

As for the most important section for Society business, the Council minutes. I was unprepared for the reaction of members of the Editorial Board to the method used in writing the minutes in the Journal. To remind you, as reported in the Journal, they are only a summary, and are not legally official. Each organization, committee or group writes minutes the way it wishes. There is no sacrosanct method. It is difficult to make minutes readable and/or interesting. But the Council has instructed Dr. Grendon, chairman of the Council, Dr. Richards, and me to scrutinize the minutes to see whether or not they can be presented in a more readable and/or interesting fashion. Our concern is that in making them more readable we might editorialize and make them objectionably too subjective. I don't have to tell you about Dr. Richards' writing ability; I feel sure that they can be made more readable, always with the support of the Council.

Though the budget given to you in December is official, accepted, and audited, I would like to present specific aspects from a different angle to show you how we worked at cutting Journal expenses and increasing income. The figures are rough and approximate, given with fairness in mind.

One of our major changes was to put printing for the Journal out to bids. We did this with reluctance because of the long association with our past printer. But it was well worth it. We got lower bids. I was especially happy to receive on the day we finalized our new agreement a telephone invitation to me by a reliable printer offering to duplicate any bid we received. We could not consider it, but it meant that there are printers willing to bid. With this bid, and abiding strictly to our average 64-page issue, we should be able to save about $10,000. a year in printing alone. Our printing bills for the Journal had been:

1969	$37,525.
1970	$46,867.
1971	$45,056.
1972	$42,041.
1973	$39,587.

I'll also include here the cost for the Roster. (different printer used in publishing Roster).

1968	$1,825.
1969	$1,895.
1970	$2,450.
1971	$2,610.
1972	$2,875.
1973	$3,065. (Cost of about $31.00 per page.)

Let me next tabulate in *approximate* and *rough* form the figures.

SAVINGS:

(1) Printing	$10,000.00
(2) Elimination of the service of "free" Placement Opportunities to members. Average of 3½ pages per issue at $50.00 x 12 = 42 pages =	$ 2,000.00
(3) No more reprints of editorials	$ 1,500.00
(4) Change in mailing method: ADDRESS LABELS for ENVELOPES	$ 1,200.00
(5) No more electro-plates (not required with offset printing)	$ 1,800.00
(6) Savings to be expected from author's alterations	$ 1,000.00

Let me briefly elaborate on several points:

(1) Drug advertising. This is our greatest source of income. During the last few years the drug industry has been under attack and has decreased its advertising. In 1973 our income from national advertising dropped by 28%. We get these ads from a national advertising agency handling most of the state medical journals. The drug companies choose the state journals in which they wish to advertise. It was frustrating for me to learn that we are near the bottom of the list in the state advertising revenues. The obvious reasons are this: the south and midwest which derive the greatest income from such advertising have more family physicians who apparently write more prescriptions. Also, I am told that our physicians write for more drugs generically, which is of little assistance to individual drug companies with brand names. However, we hope to increase the number of ads as the quality of our Journal gets better, and when we can prove to advertisers that the Journal is read more. We increased our advertising rates 15% July, 1972.

We can, however, get our own non-drug advertising at a local level. In 1972 Staff was able to get two new contracts for advertising which amounted to: $281.00.

After several months as Editor, I decided to see (1973), without previous experience, how difficult or easy it was to get advertising from Connecticut business firms. Without getting into Mr. Tomat's hair, I helped. I felt that we had a good product for advertising. Using a technique of personal letters, followed up by personal notes and telephone calls, in a period of five to seven months, income from local new advertising resulted in contracts of about $8,500. We feel that this can be increased. Mr. Tomat is presently (since September 1973) taking care of this alone as he did before. We are trying to see if Staff can do it without having to use a professional advertising agency.

I have given you these rough estimates and approximate figures only to assure you of the efforts made to minimize costs and increase income in the Journal budget. I hope I shall not need to do so in the future.

As Editor, however, I should add this: I feel that the Journal can be improved, greatly improved, with an increased budget. The Council increased the honorarium of the Editor to $7,500. for this year. It is easily a normal full-time week of 35 hours. I have been spending approximately an average of 25 hours a week now. With an increased budget, we could eliminate unattractive ads, such as the one on the front cover. We could also use money to pay for certain articles. Just as I was preparing this report, for example, I requested permission of the *New York Times* to publish Dr. Lawrence Altman's series of three articles on the Swedish health system, this is one of the best I have read. The permissions editor asked for a token $100.; the article is worth much more than this. We do not do this as a policy. I think that we should. Last year I paid $100. for one of the articles in the Journal out of my own pocket because it was exceptionally worthwhile. We also could use the part-time services of a copy editor. Any one who has had the job of reviewing articles submitted to a Journal, as I have now, would appreciate this need. We could also increase the number of pages in the Journal from 64 to 68 or 72. I am merely alerting the House in case we do ask the House for more money next year.

Lastly, I want to call upon the individual delegates in the House for help to the Editor and Editorial Board in improving the quality of the Journal. Delegates in this House are scattered throughout the state and represent different specialties and different hospitals. It is very important to an editor to know what physicians throughout the state are thinking and what they feel they need and want. I would hope that if we sent questionnaires out, only to the delegates, that they would help us by filling them out. We would also appreciate suggestions or criticisms. I believe that the House of Delegates represents a reasonable cross-section of physicians in the state so that their thinking is representative, worthwhile and important.

Report of: J. Alfred Fabro, M.D., Editor—Annual Meeting, House of Delegates, April 30, 1974.

Perinatal Morbidity and Mortality Committee

Case History and Commentary

William E. Lattanzi, M.D., *Chairman*

Introduction

This is the third in a series of perinatal case presentations and commentary submitted by the Connecticut State Medical Society's Committee to Study Perinatal Morbidity and Mortality.

The case material will be actual patients delivered in the State, that are felt by the Committee to represent preventable or probably preventable deaths. The cases selected will be discussed by either members of the Committee or an invited guest.

The purpose of the presentation and commentary will be the dissemination of instructional information to the readers of the Journal.

This month's discussant is Dr. Virginia Stuermer, Associate Clinical Professor of Obstetrics and Gynecology at Yale University, and a member of the CSMS Committee.

Case History

Mother was a 24-year-old G1, PO who delivered a female infant within three days of her EDC. Mother had negative serology, was Type A, Rh negative, with negative titer two months prior to delivery. Her husband was 0 positive. She had 6 prenatal visits with a weight gain of 8 lbs. On admission for delivery she had had a fever of 101°F. Fetal heart was reported as normal. Her second stage was 1 hour and 45 minutes; anesthesia consisted of Valium, Nembutal, Demerol, and Phenergan, the last dose given 8 hours prior to delivery.

The baby was born weighing approximately 9 lbs. and delivered with mid-forceps. Apgar at one minute was 4, and at 5 minutes was 7. Although the baby breathed spontaneously, there was reported difficulty in breathing from the time of birth. She was placed in an isolette for humidity and warmth, with an 02 concentration of 34%. The heart rate was 180, respirations were 80/min. The color seemed somewhat improved in the isolette from that at the time of birth.

At 2 hours and 15 minutes after birth, the baby was removed from the isolette for an X-ray of the chest, but respirations ceased and she was returned to the isolette and given assisted ventilation with oxygen by mask. The respirations could not be maintained spontaneously and assisted ventilation was administered until respirations resumed. At that time, her respiratory rate was 24 and shallow, and the patient's color was pale to gray. She was laryngoscoped, but a cardiac arrest occurred, which was treated with intracardiac adrenalin and continuous positive oxygen. However, the patient went downhill and a final cardiac arrest occurred four hours after birth, from which she could not be resuscitated.

Lab values obtained at birth were a blood type A+ and Coombs negative. Other lab work was done 3 hours following delivery, and revealed a blood sugar of 11, hemoglobin of 13.2, hematocrit of 40. An I.V. was started at that time by umbilical vein, and epinephrine, bicarbonate, and glucose were given.

Just at the time of death, a pH of 7.45 (contaminated by bicarbonate) and PO2 of 20 were obtained.

Final anatomical report listed respiratory insufficiency as the cause of death. This was evidenced by:

1. Bilateral pulmonary atelectasis with focal aerated areas of the pulmonary parenchyma.
2. General anoxemic cellular changes involving: heart, kidneys and liver.

Discussion

With the growth of perinatology into a subspecialty of both obstetrics and pediatrics, an early warning system is emerging which should alert obstetricians to potential perinatal problems. The case this month has many such signals.

A 24-year-old G1 PO was admitted at term in labor. On admission the patient had a fever of 101 with ruptured membranes (Warning Signal No. 1). Total labor was not recorded, but the patient had received doses of Valium, Nembutal, Demerol, and Phenergan, the last dose of which was given 8 hours before delivery (Warning Signal No. 2). Second stage of labor was recorded as lasting one hour and 45 minutes (Warning Signal No. 3). Labor was terminated by a mid-forceps delivery of a 9 lb. infant with an Apgar of 4 and 7 (Warning Signal No. 4). The infant breathed spontaneously, but respirations were reported as difficult from birth (Warning Signal No. 5). In an isolette with oxygen concentration of 34%, the heart rate was 180 and respirations were 80 per minute. At 2 hours 15 minutes post delivery, a chest X-ray was done during which respirations ceased. Upon returning the infant to the isolette, oxygen was given by mask and assisted ventilation was continued until spontaneous respirations resumed. At that time the respiratory rate was 24 and shallow; color was pale to gray. Laryngoscopy was attempted during which cardiac arrest occurred. Despite intracardiac Adrenalin, and positive pressure oxygen, the patient's condition deteriorated and final cardiac arrest occurred at 4 hours post partum.

Laboratory studies done at 3 hours postpartum consisted of blood sugar 11 mgm%, hemoglobin 13.2, hematocrit 40. An I.V. had been started at this time in the umbilical vein through which epinephrine, bicarbonate, and glucose were given. Only at the point of death were pH and PO2 obtained.

Warning Signal No. 1—A woman in labor with ruptured membranes and an elevated temperature has chorioamnionitis until proved otherwise. Immediate steps must be taken to establish the etiology

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DR. WILLIAM E. LATTANZI, Chairman, Connecticut State Medical Society's Committee to Study Perinatal Morbidity and Mortality.

of the fever. Systemic causes should be eliminated. Some helpful diagnostic signs include purulent vaginal discharge, a rise in maternal temperature, an unexplained maternal tachycardia, a tender uterus, and the disappearance of the FH. Appearance of WBC in the amniotic fluid is a positive indication of chorioamnionitis. With the first signs of infection, antibiotics should be started and delivery should be accomplished as soon as possible. Since chorioamnionitis may lead to maternal sepsis with increased morbidity and occasional mortality, there is no doubt that the sooner delivery occurs after the diagnosis is made, the better; indeed, unless delivery can be predicted to occur within 1 to 2 hours, consideration must be given to terminating labor by c-section for both mother and child.

Chorioamnionitis becomes a potential hazard to the fetus as soon as the membranes rupture. Webb[1] has reported that perinatal mortality is doubled if membranes are *not* intact on the onset of labor and doubles again with the passage of each 24 hour period. The baby may develop gastroenteritis, conjunctivitis, otitis, septicemia, meningitis or jaundice, but Little[2] says the fetus most commonly dies of congenital aspiration pneumonia.

At delivery, a pediatrician should be in attendance, the mouth and nasopharynx cleared, resuscitation carried out if needed, and all orifices cultured including the gastric aspirate. Too much time elapsed between temperature elevation and delivery in this case and apparently no remedial steps were taken to combat the intrauterine infection (if that was the etiology of the fever).

Warning Signal No. 2—Although the analgesic drugs used probably did not contribute to fetal demise, mixing four drugs when one or two might have done is undesirable.

Warning Signals No. 3 and No. 4—will be discussed together. Friedman[3] has delineated an analytical scheme for following a patient in labor. Failure to progress must be anticipated in a nullipara with an obviously large baby. If any disorder occurs in the pelvic division of labor, such as (1) prolonged deceleration phase, exceeding the three hours in a nullipara, or (2) protracted descent, less than one centimeter per hour in nullipara, or (3) arrest of descent, cephalo-pelvic disproportion must be sought and if present caesarean section done. "This recommendation holds even when one might be tempted to try vaginal delivery because the cervix is fully dilated and the vertex is in the midpelvis . . . It is imperative that mid-forceps operations be avoided under these circumstances in view of the high associated fetal morbidity and mortality rates." (Friedman).[3]

Warning Signal No. 5—is really a cumulative red warning. A nullip with a large baby is admitted in labor with ruptured membranes and a fever. The vertex has reached the midpelvis and operative delivery is planned.

Certainly these circumstances dictate that a pediatrician be present for the delivery. If he was not present for the delivery itself, the condition of the baby at delivery warranted immediate consultation. At the very least, the maternal fever and operative delivery demanded a search for sepsis and for central nervous system injury, especially a bleed. The weight of the infant should have suggested an early check of blood sugar, the respiratory problems early blood gases.

No extraordinary monitoring techniques were needed to have provided better care in this case. Every hospital in the state could have provided the minimally indicated laboratory procedures. Every obstetrician should bring to the labor room alert, practical, watchful management of labor which anticipates the trouble which may arise in this complex process. When the fetus is at risk there is no substitute for the pediatrician in the delivery room.

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Why I'm Finally Joining the AMA

Michael J. Halberstam, M.D.
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"I've changed some, the AMA has changed some, and the problems we all have to face together have changed enormously," says the author in explaining why he became a member.

I have been in private practice for eight years now and have never been a dues-paying member of the AMA. In my opinion it's a clumsy, outdated cross between a trade union and a tissue review committee. I'm joining it today.

Why would anyone pay $110 a year for the privilege of belonging to an outfit he considers anachronistic and not particularly representative of his views? The answer is that I've changed some, the AMA has changed some, and the problems we all have to face together have changed enormously.

My initial distaste for the AMA came from that strongest of influences, my family. From childhood on I listened to my surgeon-father and G.P.-uncle swapping medical stories and damning the AMA. Liberals both, they felt that the association was a reactionary dinosaur fighting against good medical care (I think they were correct). As some kids hear sea stories or legends of the pioneers, I heard how the AMA had fought Blue Shield and tried to stop the prepay Group Health Association in Washington, D.C.

Nothing I learned in college or medical school disabused me of this bias. I was an idealistic student when the AMA mounted its multimillion-dollar public relations campaign against Harry Truman's medical-care bill, and though I didn't like the bill, the campaign was even worse. The monolithic power of the AMA won, though, as it usually did in those days.

By the time I started my own practice in 1964, things had changed. The King-Anderson bill had become law over the AMA's objections. In my practice I saw that the concept of the AMA as an all-powerful guild was no longer accurate. Doctors danced to the tunes set by their specialty societies, their hospitals, and their local medical societies, and they couldn't have cared less what the people at 535 North Dearborn Street in Chicago were doing.

Clearly, the liberal journalists and reformers who continued to bark after the AMA as the dominant source of America's medical problems were mired in the rhetoric of the 1930s, '40s, and '50s. The AMA that they blamed for everything from low numbers of medical students to high infant mortality rates was now a paper tiger. Such observers of the medical radicals became aware of this. In their analysis of the situation, the nation's health problems stemmed from the fact that medical care had been taken over by a "medical-industrial complex" in which the stakes were hundreds of millions of dollars in construction contracts, equipment purchases, and fat HEW grants.

I agreed with much of this analysis and was pleased to see it get some circulation. Then a funny thing happened. I began to feel sorry for the AMA. And then, of course, I started to think seriously about joining it.

It wasn't merely pity or sympathy for the underdog that made many of us revise our thinking about the AMA. The very factors that had combined to make it an underdog were instrumental in making it a more acceptable organization.

One significant change is that the AMA is being increasingly harried by political opposition within medicine itself. Such groups as the Association of American Physicians and Surgeons and the Congress of County Medical Societies attack the AMA from the right, and are gaining strength. That growing number of American doctors consider the AMA to be a left-wing sellout to the Federal Government was unknown to me until some of my articles attracted the attention of conservative physicians. I then found myself addressing the national meeting of one of these groups, and discovered a well-organized body of dedicated, intelligent men. I admired their intensity and conviction. But many of their basic political premises turned me off.

Nor could I and many other "young" physicians join the growing left-wing movement in medicine, as exemplified by the Medical Committee for Human Rights and Physicians for Social Responsibility. These and other groups had strong representation in Eastern cities, and some of my friends belonged. Agreeing with many of their goals, I was put off by their pre-cut rhetoric and their inclination to take on every non-medical social problem in sight. Even their views on medical matters, while good-hearted, were naive. Many members had never practiced in the community, but were full-time employees of universities or the Government. I decided to work with them on specific projects—free clinics, draft counseling—but to forego membership.

Thus, in the politics of medical care, I was a man without a country. Up to this point, the dilemma had never bothered me. I had rationalized that avoiding membership in any medical organization left me free to write articles without being accused of bias.

But the little stirrings of sympathy for the AMA made me re-examine this position. One of the main objections to the AMA among liberal doctors had been its power. There had been something obscene about a professional group that so completely dominated not only its own profession but all the outreaches of medical care. This was no longer so. The AMA now competes not only with other groups inside medicine but with the American Hospital Association and the American Public Health Association.

Moreover, the enormous power to control the practice of medicine once held by the AMA had shifted to the Federal Government. To any liberal or conservative nervous about the concentration of power in a single institution, it has become clear that the Government's influence in medical care must be balanced by a countervailing force—which only the AMA could provide.

Earlier I believed that the specialty societies had made the AMA obsolete. In some ways this is true—the AMA's conventions will never again have the scientific impact they once had and may eventually wither away. But as I reflected on American history and medical politics, it grew ever clearer that the more important the specialty societies become, the more essential it is to have a single group representing all physicians. As impressed as I am by the leadership in my own specialty's socio-economic arm, I'm sure the American Society of Internal Medicine can't bargain in Congress the way the AMA can.

The crux is that the AMA has changed, and so have I. I've seen some of the warnings of "reactionary" doctors come true—for example, the Federal subsidy of medical education is already being advanced as a justification for letting the Government tell doctors where to practice. My own "delivery of medical care" is now hindered by a cobweb of FDA rules about telephone prescriptions, verboten medicines, and trial samples. Like many liberals, I think the Government's automatic attempt to solve problems by passing laws and imposing regulations has become counterproductive. The Government can and should protect the innocent, but only God can keep damn fools from acting like damn fools.

The acceptance by liberals of limits on Government intervention has been matched by their acceptance of some intervention by the AMA. Indeed, this is what its right-wing critics find so maddening. The AMA's stated policies are now consistent with the social philosophy of what might be called moderate Democrats and "Eastern" Republicans. The thunder about socialized medicine no longer comes from Chicago, but from the A.A.P.S. and other conservative groups.

In the confrontation between the AMA and Senator Kennedy, it seems obvious that the name-calling and the political power plays have come from the latter, not the former. Far from opposing prepaid medicine, the AMA concedes that it is a perfectly valid way to practice.

There are some things that only the AMA can do. Only it can drive home the single reform that would provide the greatest improvement in medical care for the least money—periodic relicensing and recertification. This would not only give the patient assurance of a reasonably up-to-date physician, but, done voluntarily, would put medicine a quantum leap ahead of other professions and occupations in self-regulations.

Most important, only the AMA can speak to the Congress and the people as the voice of medicine. To do this properly and to escape the justified charges that it has been overly representative of older, conservative, small-town doctors, the AMA must reform itself. It might begin by doing what Congress itself does—allow dissenting members to state their views on certain public issues in an official minority report. This would not invalidate the idea of "staying together," any more than a 5-to-4 Supreme Court vote is less valid than a 9-to-0 decision. Trying to preserve the myth of physician unanimity has led to a feeling of despair among dissenting members that their views would ever be reflected in AMA policy.

Nationwide referendums on key issues should be taken regularly among AMA members. Electronic tabulators could enable local and state societies to poll their entire memberships, and the results would be available the next morning. What better way to end charges that the AMA is inflexible, its House of Delegates unresponsive?

I'm aware that such influential physicians as George Himler and Wesley Hall have banged their heads against the AMA hierarchy, which doesn't appear to have bent, much less cracked. But the early history of the AMA shows that for many years it was a progressive, reforming group, particularly when it had a strong cadre of academic physicians taking active part. As academic medicine diverged from practice, the reformers within the AMA became weaker and weaker. Recent small-scale local rebellions show that youthful and academic doctors will join medical societies if the issues are pressing enough. Too often, however, such efforts are a temporary ballot-stuffing maneuver, with the "reform" element dropping out as soon as the critical issue is settled.

I'm encouraged by what I've read about last summer's AMA convention in San Francisco. The inclusion of a voting medical student within the House of Delegates may be tokenism, but tokenism often precedes genuine reform. The increasing encouragement of intern-resident membership was evident at San Francisco and should be continued. A special attempt should also be made to reinterest academic physicians in the day-to-day work of the AMA.

I liked the valedictory by Dr. Hall and the salutation by Dr. Hoffman, though I disagreed with parts of each. I was encouraged by the printout of the membership poll on medical issues. Some questions seemed a bit slanted in wording, but the important thing is that the AMA is genuinely trying to find out what its membership believes. It hasn't got to instant across-the-nation electronic voting and tabulation yet, but it's on the way. I'm hopeful of further evidence of its growing responsiveness at the winter convention that's about to get under way in Cincinnati.

So off goes my check for $110. I write it with open eyes. I think the AMA is going to change very slowly, but I'd like to help in some of that changing. So far as the future of medicine is concerned, the AMA is really the only game in town.

Dr. Halberstam's article is reprinted through the courtesy of Medical Economics.

WHAT HOSPITAL DOCTORS AND FAMILY PHYSICIANS IN PRIVATE PRACTICE THINK ABOUT PSROs—A COMPARISON

In addition to gathering the opinions of 829 hospital-based doctors, we also did a "grassroots" survey of family physicians in private practice in the South and Midwest. Here's how 1,039 answered our two questions on PSROs—as compared to the vote of 277 residents in internal medicine and 552 full-time staff physicians, including some chiefs, chairmen, medical school faculty and others who divide their time between patient care and other hospital activities.

1. Are you in favor of PSROs?

	Residents	**Full-time Staff**	**Family Physicians**
YES	141 (50.9%)	265 /48%)	84 (8%)
NO	103 (37.1%)	247 (45%)	897 (86%)
No answer	33 (12.0%)	40 (7%)	58 (6%)

2. Are you opposed to PSROs?

	Residents	**Full-time Staff**	**Family Physicians**
YES	98 (35%)	233 (42%)	858 (83%)
NO	91 (33%)	155 (28%)	98 (9%)
No answer	88 (32%)	164 (30%)	83 (8%)

— *Resident and Staff Physician*, July 1974

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Leadership in American Medicine

A Matter of Personal Responsibility

John Gordon Freymann, M.D.
WORCESTER, MASSACHUSETTS

> There is today no subject . . . that deserves and will require more careful, exhaustive, dispassionate and unprejudiced study than social insurance, or that will, whatever the final conclusions, demand greater tact, diplomacy and good judgment in practical handling. It is, therefore, of the utmost importance that physicians both as individuals and organizations abandon the attitude of unreasoning opposition which has characterized many of our professional discussions on this question and make an honest effort to study the problems involved and to arrive at conclusions which can be justified . . . By the end of another year the question may and probably will be a vital issue in a number of states.[1]
>
> Report of the Council on Health and Public Instruction, American Medical Association, 1919.

No paper on medicine and society can begin without reference to the socio-economic revolution, but the revolution is usually referred to as if it were reaching its culmination at the moment of writing. One tends to forget that one is in the midst of changes that first affected medicine sixty years ago and that the profession has faced essentially the same problems throughout this century. The opening quotation, for example, is as applicable today as when it was written forty-four years ago.

Tremendous changes in the social organization of medicine have occurred. They have been relatively gradual, but, by looking back, one can see that they are on a rising evolutionary curve, with nothing to suggest its leveling off in the foreseeable future. However, there is considerable doubt about the control that American medicine will have over the course of such changes.

There is a tendency to ignore the fact that, among the many forces shaping changes in medical education, research and practice, the medical profession is only one factor, and certainly not the most important one. Change is dictated by the needs and wants of society.[2] The profession has a choice between accepting changes forced upon it and attempting to guide the direction of change. Medical leadership, to be effective, must have a single authoritative voice that is representative of both the practicing physician and the scientific and academic leaders of medicine. Such a voice must be constructive and courageous. It must anticipate change. It must be a positive force among all the others exerting pressure upon American medicine.

If American medicine has any voice, it is the American Medical Association. For better or for worse, since 1847, the AMA has been the only agency organized to speak for the entire profession. Other organizations do speak, sometimes very loudly, but they make no pretense of speaking for medicine as a whole. In the opinion of many persons the present socio-economic policy of the AMA is unimaginative, passive and obstructionist. But if it is indeed the only voice of the whole profession, it behooves one to look more closely at this often damned organization.

It is my hope to establish four themes: that the AMA was once a constructive organization that, under inspired leadership, anticipated our present problems fifty years ago; that the change in its policies and its failure to continue as a unifying, leading force were and are due to an abdication of responsibility by the scientific and academic leaders of American medicine; that owing to blindness and selfishness on both sides, a schism between practicing and academic physicians has resulted that has jeopardized the profession's control of its own destiny; and that a "Third Force" in American medicine has arisen that bridges this schism but is not yet recognized as a force, even by itself.

A solution based upon these themes that requires neither blind acceptance nor blind rejection of the AMA will be offered. It is an appeal to re-establish the Association as the force it once was and again must be. The only alternative is submission to external pressure.

The AMA and the Development of American Medicine

> Let us look at the record [of the AMA], but let us look at it not for the purpose of recrimination, but in order to gain insight which will permit us to foresee with some accuracy the type of behavior which we may expect in the future. It is impossible fully to understand the present behavior of organized medicine without knowing something of its past history.[3]
>
> James Howard Means

It is currently fashionable to make a derogatory remark, often humorous, in reflex response to mention of the AMA.† If the AMA is nonrepresentative

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DR. JOHN GORDON FREYMANN, Director of medical education, The Memorial Hospital.

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†There is a tendency to ignore its work in maintaining high standards of education in medical schools and hospitals, in maintaining hospital standards, in investigating drugs, in exposing quackery and in many other fields. This is probably because in an era of socio-economic evolution, the chief image of the AMA in the minds of both physicians and laymen is as a political force.

and reactionary, how can anyone seriously advocate it as the key to current problems? But the AMA cannot be dismissed so simply. History shows that it has been one of the few really significant factors in the development of American medicine. Its present condition is a relatively recent phenomenon, obscuring past triumphs. To understand the Association of today and to anticipate the future, one must briefly explore the past.

The AMA was organized in 1847 for one purpose: improvement of medical education. It gave remarkable powers to medical schools and hospitals by authorizing two delegates from every hospital containing "100 inmates or more" and two delegates from every "regularly constituted and chartered school of medicine."[4] But in spite of high hopes, the efforts of the AMA to improve the standards of education during these early years proved futile. Those who are pessimistic about the current, seemingly insoluble problems should derive some comfort from the bleak prospects of a century ago. In 1869, twenty-two years after the founding of the AMA, its president could see only one possible solution to an otherwise hopeless prospect:[5]

> The plan of action you have adopted, that of endeavoring to induce forty or fifty medical colleges . . . to agree voluntarily upon a "uniform and elevated standard of requirements for the degree of M.D." . . . has become almost a Utopian idea, a forlorn hope. Though urged with all the force that truth could impart, and enforced with all the appealing earnestness that the gravity of the subject could inspire, yet your views and wishes have not impressed themselves on the schools to such an extent as to change their course of action. It seems to me that all hope of reform through this means must be abandoned . . . I can see no mode by which it can be accomplished, except through FEDERAL LEGISLATION.*

The history of the Association throughout the remainder of the nineteenth century showed progress in other fields, but little success in achieving its prime objective. The renaissance of American medical education really dates from the opening of Johns Hopkins University School of Medicine in 1893. The AMA can take no credit for that although Welch and Osler were very active members and Welch later became its president. However, as the twentieth century opened, Hopkins was still an island in a sea of mediocrity. It was the only school requiring a collegiate premedical background. One hundred and fifty-nine other medical schools granted the medical degree at their own pleasure.

In 1901 the AMA was completely reorganized. A Board of Trustees with executive powers was established. The loose National Convention with casual delegates was replaced by the formally elected House of Delegates, whose members directly represented their local societies. Of greater importance, the many areas of interest of the AMA were clearly defined, and Councils with full-time staffs were assigned to concentrate upon them.

Most important was the Council on Medical Education, formed in 1904. It reported the highly critical results of its first national inspection of medical schools in 1907. Because of considerable resentment the Council thought that, "if we could obtain the publication and approval of our work by the Carnegie Foundation for the Advancement of Teaching, it would assist materially in securing the results we were attempting to bring about."[6] The result was the Flexner Report of 1910.[7] Armed with this report, the Council and the AMA were able to exert pressure upon all schools through the profession and the public and, where necessary, through licensing agencies. Within five years 65 medical schools had disappeared. The reorganized AMA had finally succeeded in a reform first envisioned at the founding convention sixty-three years before.

In the years just before World War I the Association reached its Golden Age. Its great objective had finally been achieved. Its councils were pre-eminent in control of drugs, education and standards of medical practice. The *Journal* was universally respected and had the largest circulation of any medical periodical in the world. The roster of its presidents was a rollcall of the scientific and academic leaders of the day: W.W. Keen (1900); Frank Billings (1903); John H. Musser (1904); W.J. Mayo (1906); William C. Gorgas (1909); William H. Welch (1910); John B. Murphy (1911); Abraham Jacobi (1912); Victor C. Vaughan (1914); William L. Rodman (1915); Charles H. Mayo (1917); and Arthur Dean Bevan (1918). And these men were not mere figureheads. Although the working structure of the AMA included representatives from small towns and large cities, many key positions were held by academic leaders of the day. William T. Councilman, Professor of Pathology at Harvard, was a Trustee from 1909 to 1917 and chairman for four of these years. Henry Christian chaired the Judicial Council in 1909-1910, and Alexander Lambert (of whom more is discussed below) was its chairman from 1911 to 1918. The Council on Health and Public Instruction was led by Victor Vaughan, dean of the University of Michigan Medical School, and Walter B. Cannon was a member of this council from its formation in 1910 to its dissolution in 1922. Among the vice-presidents were Alice Hamilton, of Chicago (1914), Lewellys Barker, of Johns Hopkins (1916), and David L. Edsall, dean of Harvard Medical School (1919).

It must be remembered that these were the Good Years for the nation and the Western World—the years in which misery and injustice still existed, but no one doubted that improvement was inevitable. This was the progressive era of Theodore Roosevelt's Square Deal and Woodrow Wilson's New Freedom. These were the years that saw enforcement of the antitrust laws, direct election of senators, woman suffrage, the conservation movement and other reforms in every walk of life. It is not surprising that the same attitude pervaded medicine. The glowing optimism of the era is reflected in the Presidential Address of William H. Welch[8] in 1910:

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*Capitals as published.

> Among the organized forces for advancing the prosperity, the happiness and the well-being of the people of this country, the AMA has an important part to play. We are justified in the confidence that, with the united support and loyalty of the profession, this Association, broadly representative and standing for the best ideals of medical science and art and for professional and civic righteousness, will contribute a beneficient share to the working out of our national destiny.

Flushed with victory on many fronts, the Association was a driving and progressive organization. It was ready to push on into new fields.

The lead article in the *Journal of the American Medical Association* for January 30, 1915, was entitled, "Social Insurance and the Medical Profession."[9] The concluding paragraph read as follows:

> A solid foundation for a new national pride is rapidly developing. Let us hope that in the development of social insurance we shall find in the American physician not the stubborn opponent that the British medical profession has been, but an enthusiastic ally, and thus once more prove that in social ethics we are able and willing to rise above European standards.

In June of that year, the "Supreme Court" of the AMA, the Judicial Council, reported to the House of Delegates on the social-insurance programs in other countries. The report, which was written by the Council chairman, Alexander Lambert, and filled 19 pages in the *Journal*, concluded as follows:[10]

> It is evident, therefore, that once the old social and legal equilibrium has been upset, society tends to follow to the logical conclusion until it reaches a new equilibrium under a new social system . . . These forces unquestionably tend to improve the social condition in any given community, and, for the carrying out of any scheme tending to human betterment, the medical profession must necessarily be included . . . The medical profession will accept its responsibility in these new social conditions as it always accepted its responsibilities in the past.

This report was accepted by a Reference Committee of the House of Delegates that "earnestly recommended" that the House permit its publication. Furthermore, the Committee suggested that the members of the AMA regard the report as a "*vade mecum* on these important social economic problems."[11]

Thus began a remarkable period in the history of the AMA. In 1916 the Association established the Committee on Social Insurance, with Alexander Lambert as chairman. An office, with a full-time executive secretary and staff, was opened in New York City. The Board of Trustees charged the Committee to compile information on "social or health insurance and the relations of physicians thereto; and to do everything in their power to secure such constructions of the proposed laws as will work the most harmonious adjustment of the new sociologic relations between physicians and laymen which will necessarily result therefrom . . . . "[12]

In 1916 and 1917 two comprehensive reports from the Committee on Social Insurance reviewed the experience of European countries in all forms of social insurance: Workmen's Compensation laws; maternal and child care; old-age benefits; health and accident insurance; and so forth. The Committee looked with some favor upon a system of federal sickness insurance for employees of firms engaged in interstate commerce that would be financed on the basis of contributions by employees, employers and the federal Government. It stated that correlation of the insurance system with the medical profession was an absolute necessity and that the right of selection of physician was to be retained by the insured.[12]

The Reference Committee that considered the 1916 report accepted it with the observation that "this Committee [on social insurance] proposes to undertake in the near future . . . to educate the American medical profession in the general principles of social insurance . . . "[13] The Reference Committee suggested establishment by each state association of a committee on social insurance to work in conjunction with the national committee.

There is evidence of opposition in the 1917 report,[14] for Chairman Lambert commented, " . . . a few years ago accident insurance was condemned as un-American and the same adjective is being used against the other forms of social insurance today." Throughout the report twin themes were reiterated: that the insurance principle must be applied to medical needs; and that "the provisions of the insurance laws dealing with all matters of medical aid be prepared with the active cooperation and under the careful scrutiny of the profession." It concluded:

> Blind opposition, indignant repudiation, bitter denunciation of these laws is worse than useless; it leads nowhere and it leaves the profession in a position of helplessness if the rising tide of social development sweeps over them. The profession can, through its influence in the community, prevent for a time these laws being passed and it can, by a refusal to cooperate, still further retard them, but in the end the social forces that demand these laws and demand an improvement in the social existence of the great mass of the people of the nation will indignantly force a recalcitrant profession to accept that which is unjust to it and that which is to its detriment.

Resolutions were proposed authorizing continued study of social insurance, urging co-operation between medical societies and legislatures in the molding of insurance laws and insisting that all social-insurance legislation should provide free choice of physician, payment of a physician in proportion to service rendered, separation of administrative supervision from medical care and adequate representation in administrative bodies by physicians.

The Reference Committee that considered this report referred it to the House of Delegates with an expression of appreciation and with the recommendation that both the report and its accompanying resolutions were adopted. The seriousness of the Reference Committee's intent to convert information into political action is shown by a further recommendation "that the Secretary of the Association be instructed to transmit a copy of these resolutions to each . . . state association and to inform each . . . association that the Council on Health and Public Instruction is willing to cooperate with the state association whenever social insurance questions are to be considered by the law-making bodies of the respective states."[15]

The report and resolutions were adopted by the House of Delegates on the morning of June 5, 1917. In his *History of the AMA,* Morris Fishbein[16] commented with obvious wonder. "This was not a rejection of compulsory sickness insurance; it seems to have been a qualified acceptance."

The spirit of progressive optimism still pervaded that spring morning in New York City. But the United States had already been two months at war. The next night the British Army began the ghastly Flanders offensive, which was to kill or maim 1,000,000 more young Europeans before autumn. Time was running out on the Good Years.

By 1918 all members of the Council on Health and Public Instruction, which was the parent body of the Committee on Social Insurance, were in France. So were Alexander Lambert and the members of his committee. That year there was no report from the Committee on Social Insurance and only a brief one from the Council. In his *History*, Fishbein writes the obituary: "It is interesting to think what might have happened relating to social insurance if the war had not intervened."[17]

There was to be a brief continuation of the progressive attitude in 1919. Lambert, who was now president-elect of the AMA, wrote another comprehensive report. Although it appears that the Committee on Social Insurance still considered governmental insurance as the best answer the 1919 report contains a farsighted statement anticipating the Blue Cross principle by many years, and its acceptance by the AMA by many more:

> Experience . . . has shown that health insurance, to be successful, must be a matter of confined local administration. The insurance funds necessary for this must be made up, not of commercial insurance carriers, but of mutual funds formed by the employers and the employees together and supervised in their administration by the State or by groups of people in certain areas formed into a mutual society. This makes it possible for county societies to represent the profession and deal directly with these funds and obtain just terms in remuneration for the care of the sick.[18]*

In a separate report, the Council on Health and Public Instruction commented on the "unreasoning opposition [of many physicians] without any effort to study the question." It urged, "the most careful, painstaking, patient and disinterested study, [so] that we qualify ourselves as authorities instead of allowing this function to be exercised by the active proponents of social insurance."[1]

The Reference Committee accepted the report of the Committee on Social Insurance with thanks for "the tremendous work they have already done and are doing to solve this problem, which vitally interests every man, woman and child in the United States,"[19] and the House of Delegates concurred. At the same time a resolution from New York *opposing* compulsory health insurance was tabled with the statement that action on this matter "would be an attempt to settle the subject when evidence for and against it is far from complete."[19] This was to be the last liberal act of the House of Delegates for many years to come.

By 1920 a remarkable change had occurred. Correspondence in the *Journal of the American Medical Association* attacked the reports of the Committee on Social Insurance and the reports of the Council on Health and Public Instruction as propaganda similar to that being used by the American Association for Labor Legislation. Alexander Lambert was now president, but his address made no mention of the subject to which he had devoted so much of the previous five years. The report of the Council on Health and Public Instruction noted the growing opposition of physicians to social insurance. Its conclusion gives a peculiarly negative twist to their report of only the year before and marks the end of the Committee on Social Insurance:[20]

> The objects which the Council had in view of creating this Committee . . . to arouse the medical profession to a discussion of this subject and to prevent the premature adoption of any such measures in this country as in England without the full knowledge of the medical profession, has evidently been accomplished.

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*It may be significant that although the 1916 and 1917 reports, which ran 34 pages apiece, were published in full in the *Journal of the American Medical Association,* the 1919 report of the Committee on Social Insurance was printed only in the official minutes.

A number of resolutions from state societies opposing compulsory sickness insurance were combined into one that was, unlike the resolution offered in the previous year, approved by the House of Delegates. The Council on Health and Public Instruction was blandly directed "to investigate the relative adequacy of medical service and relations of the profession to the public and report at the next Annual Session."[21] No mention was made of the exhaustive reports on this subject submitted over the previous five years.

In 1921 the Council submitted the requested report. It contained twelve propositions covering a variety of subjects, mostly preventive medicine. There was no mention of any form of health insurance, compulsory or otherwise.[22] In 1922 the Speaker of the House of Delegates made his address in a tone that should be compared with that of the reports previously quoted:

> Compulsory health insurance never will and never can become an American institution. As our campaign of public education broadens, this fantastic, un-American machination and the fancies of its proponents will fail to arrest legislative attention and consideration or draw unto it public demand and support.[23]

The progressive years were over.

It has been the purpose of this brief history to sketch the early development of the AMA and to re-establish the now forgotten fact that the accepted policy of the Association was to view dispassionately and not without favor a system of health insurance that anticipated modern proposals by almost fifty years. It is not my purpose to argue whether this was correct or not. I only wish to show that at one time the AMA anticipated and attempted to prepare for the changes that are transforming American society.

Enough has already been written on the details of the Association's retreat from this position. One episode is sufficient illustration, the scuttling of the report of the Committee on the Costs of Medical Care.

In 1932 the five-year study of the Committee on the Costs of Medical Care was published. This committee was not sponsored by the AMA but was chaired by a former president, Ray Lyman Wilbur, and included a large number of physicians, including another former president, and also laymen who represented industrial medicine, nursing, the social sciences and the public. The majority report does not make unusual reading in 1964, for the Committee believed that "its obligations required [it] to think ahead for twenty or thirty years . . . and to present distant as well as immediate goals."[24] In brief, the recommendation was for group medical practice financed through voluntary health insurance. It was signed by 35 of the 50 members of the Committee, including 7 physicians chosen to represent private practice. The minority report, signed by 9 men, all physicians, who included the Secretary of the AMA, and M.L. Harris, president of the Association in 1929, attacked group practice for a variety of reasons now long repudiated. Voluntary health insurance was referred to as "thoroughly discredited," and they went on to say that they had "endeavored to show that there are great dangers and evils in insurance practice which must be set over against the advantages of distributing costs of medical care by this method."[25]

The Board of Trustees supported the minority report. From the forefront, the AMA had fallen to the rear. It had switched from a position of action to reaction. From 1931 to 1935 group hospitalization plans were repeatedly condemned by the House of Delegates,[26] but by 1937 they were accepted, provided that the costs of all medical services were excluded.[27] It was not until 1942 that the House approved the principle of medical service plans on a service basis.[28] By 1948 it enthusiastically resolved, "That the AMA reiterate to the public its approval of these medical service plans and stress the desirability of their rapid expansion . . ."[29]

And so it has continued to the present time with stubborn opposition to new ideas until popular acceptance makes approval inevitable. The cause once opposed becomes the battle flag of opposition to the next new idea. Thus, the Kerr-Mills law, accepted a few years ago as an inevitable compromise, is now being used to lead the battle against the King-Anderson Bill. There is disagreement on the relative merits of these two measures, but the important point is that neither one originated from planning by the medical profession. No longer a positive force, the AMA, and with it the entire medical profession has for forty years been in the negative position of supporting or opposing programs conceived by the laity and carried forward on the fitful winds of public demand.

Changes in Policies of the AMA

> But what is [the AMA's] present reputation with the profession? Does that zeal which reigned at our earlier meetings prevail now? If not, what are the reasons for its apparent or actual loss of reputation with many of our best and oldest associates? . . . I am sure that the meeting has lost reputation in the Eastern and Middle states. This I know by personal experience with some of our chief associates in Philadelphia, New York, and Boston . . . A portion of young physic, aided by some scoffing elders, would brush us away if it could do so, as a hindrance rather than a help to the progress of scientific medicine.[30]
>
> Henry I. Bowditch, President, AMA, 1877.

The rather familiar state of affairs reflected in this quotation was followed by the reforms and Golden Age of the AMA that have been described. Why, then, did the change occur in 1920, and why has the

Association come full circle back to where it stood ninety years ago? One can find several reasons. In the first place it must be realized that a tidal wave of progressivism, of which medicine was only a part, had swept the country in the first two decades of the twentieth century. After the blood bath of World War I, the tide receded in a reaction of disillusionment, leaving behind it that last, changeling offspring of the progressive era, Prohibition. Now came the years of reaction in every sphere. In politics the administration of Warren G. Harding swept into power. In religion the neo-orthodoxy of Karl Barth began to oppose the great liberal religious revolution. Such violent fluctuation could not help making itself felt on medicine.*

But another, special circumstance seems to have occurred coincidentally. This was the change in leadership of the Association. As noted above, particularly from 1900 to 1920, its presidents were men who are still remembered today as scientists and educators. After 1920 such names became fewer: Ray Lyman Wilbur (1923); W.S. Thayer (1928); E. Starr Judd (1931); Dean Lewis (1933); Walter Bierring (1934); and Frank Lahey (1941).

One can only theorize why this change occurred. There is no evidence that the scientific and academic leaders were evicted from their positions of power, so one must assume that they abdicated voluntarily. A number of reasons for this are possible. Probably the most important one was that the AMA had completely achieved the goal of educational reform. Medical education was now self-sufficient and, with the gentle guidance of the Council on Medical Education and Hospitals, self-regulating. The need of the educators for the AMA had disappeared. At a time when American medicine could finally abandon its introspection and become concerned with its relation to society, the scientists and educators became more introspective, diverted by the increasing power and prestige of the reformed medical schools and the revolution in educational methods and scientific development.

A second reason probably stems from the appointment, in 1913, of the first full-time clinical members of a medical-school faculty. By 1920 concentration on specialization and freedom from the economics of practice were drawing the new generation of academic and scientific leaders into specialty societies with objectives that were more immediate to their needs. Concerned primarily with undergraduate and graduate education, financed by universities, foundations or government, wearing shining armor in the forefront of the scientific revolution, the academic side of American medicine soon lost its identification with organized medicine. It became very easy to ignore or regard with detachment the socioeconomic currents buffeting the practice of medicine. Although there is no doubting the benefits of the full-time system, Osler clearly saw a major pitfall in 1911, when he wrote, "What would the school [Hopkins] have been if the clinical men had not been active in the local and national societies? Would whole-time men have the same influence in the profession at large? I doubt it." A few months later he wrote again, "I fear lest the broad open spirit which has characterized the school should narrow, as teacher and student chased each other down the fascinating road of research, forgetful of those wider interests to which a great hospital must minister."[31]

Fifty years later there are few teachers or researchers who know of the original mission of the AMA or, for that matter, know anything about its activities other than its public statements on economic policy. It is *de rigueur* to scoff or sneer at the AMA or to join or lead in attacks on it. With a few outstanding exceptions, most scientific and academic leaders of American medicine do not participate in the national organization, to say nothing of local and state societies.

The teacher's lack of interest is communicated to the student and is carried over into later life. In many places interest in the county and state societies has become so rare that, for instance, 75 to 300 doctors meeting in each of the five borough societies of New York City can say they speak for the 19,000 physicians of the metropolitan area.[32] The result is what one might expect if the leadership of the American government had been left, by abdication of interest and responsibility, in the hands of the ultra-conservatives who came to power in 1921 with Warren G. Harding. Federal control would still be in the hands of those forces, and, lacking the moderating influence of liberals and enlightened conservatives, the policy of the federal Government would still be one of reaction and immobility.

Practicing and Academic Physicians

> If my angry correspondents would . . . interest themselves in their county and state societies and in the elections of their various delegates, they would have less reason to complain of what some of them term the oligarchy of Chicago and the autocracy of the House of Delegates.[33]
>
> Abraham Jacobi, President, AMA, 1913.

On May 22, 1962, the hundred and eighty-first annual meeting of the Massachusetts Medical Society convened in Boston. Ordinarily, this meeting attracts little interest, but this one was different. A proposal to make AMA membership mandatory for all members of the Society was to be considered.* I cannot recall any previous evidence of interest in the Society by the senior staffs of the Boston hospitals and medical schools with which I have been associated for twenty years. Yet before this meeting, advance preparation to oppose the measure had been thorough. The results were impressive. Approximately 600 members were present when the meeting began. From distinguished professors to lowly fellows, the academic and scientific community of all the Boston hospitals and medical schools had turned out. Probably never in the hundred and eighty-one years of the Society's existence had so much outstanding medical talent been gathered in one room. The result was a foregone conclusion.

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*Dr. M.L. Harris, president of the AMA in 1929, can be used as an example of the change in the minds of men. In 1919 he had signed a visionary report of the Committee on Social Insurance. In 1932 he signed the conservative minority report of the Committee on the Costs of Medical Care.

The annual message from the President contained an appeal to those who opposed the policies of organized medicine to form a "competent, articulate, spirited and forceful minority within the organization." The President went on to say that in this minority, there might be "those who can lead us in a prophylactic program within the free-enterprise, democratic framework which we prefer . . ."[34] These suggestions were coolly received. Debate then opened on the controversial proposal. The opening speaker for the proponents ran over his allotted ten minutes before advancing his arguments. The opening speaker for the opponents was the antithesis of the proponent. His presentation was articulate, precise and delivered in just four minutes. He stated that strong members of the AMA must be voluntary members and that they should be convinced, rather than forced, into membership. He released a parliamentary steam roller that closed off further debate and defeated the proposal by an overwhelming vote. The meeting was adjourned, and, well satisfied and triumphant, the cream of Boston medicine disappeared.

I have not described this episode to argue the defeated proposal, for I believe the opponents' argument is sound. Instead I wish to show the power that academic medicine can wield with little effort in a medical society. Furthermore, I wish to show how a group that includes many of the present and future leaders of scientific medicine used its power just as negatively as the AMA has used its own. They have forgotten the historical role of the leaders of medical education in founding and leading the AMA to its first great victory. They have ignored the democratic precept that one must work and one must vote to achieve one's objectives. They are indeed guilty of the charge made by the Society's president of having "been fainthearted and derelict in their obligation."[34]

Here is exemplified the division between two factions in American medicine. On one side are those whose chief endeavors are directed toward research and teaching, and on the other those whose primary occupation is private practice. The important point is not that differences exist, but that one group dominates the political voice of American medicine, and the other chooses not to serve as a modulating influence within the organization but stays outside by its own preference. On one side is the emotional conservatism of the official spokesmen of the AMA. On the other side one finds an equally emotional liberalism, along with a thoughtless rejection of the AMA. An example of the latter, I suggest, is the petition to Congress in support of the King-Anderson bill, signed by 300 members of the faculties of the three Boston medical schools.[35] I do not think this is leadership. It is simply passive acceptance of a lay proposal that offers only half a loaf in solving the problem of distributing medical care. From so talented a group one might reasonably have expected a more satisfactory plan, or at least some suggestions for improvement that would have commanded the respectful attention of political leaders.

Caught between two negative forces, modern American medicine has been deprived of any effective voice.

The Third Force

> In considering the work of the Association, may we not say that it has accomplished a still higher task, that of uniting the medical profession? There has never been a time when it has been so free from faction.[36]
>
> Report of the Board of Trustees to the House of Delegates of the AMA, 1916.

Why has the happy state of affairs reflected in the quotation given above changed so today? The alleged schism between academic medicine and the practicing physician has been the subject of many editorials; yet little is said about why it exists. In my opinion the reasons are educational and organizational.

In the pre-Flexner era there were abundant educational reasons for a breach. The qualifications of American physicians ran the gamut from such giants as John Collins Warren, Samuel D. Gross, J. Marion Simms and Austin Flint* to men who also carried "M.D." behind their names but were barely able to read or write. Yet the organization of American medicine in those days tended to draw the factions together. The AMA and most medical societies were led by the better prepared physicians. Furthermore, the medical schools were controlled and staffed by men who were engaged in the full-time practice of medicine.

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*It is of some interest that in 1877 a proposal to make AMA membership mandatory for all members of state societies was proposed by Henry I. Bowditch, M.D., professor of medicine at Harvard Medical School, physician at the Massachusetts General Hospital and president of the AMA. The proposal was defeated by the National Convention.

*All presidents of the AMA

Since 1910 the situation has gradually reversed. The organization of medicine now encourages division. The scientific and academic leaders no longer attempt to lead the whole profession, and at the same time the development of full-time faculties has eliminated the practicing physicians from positions of importance in many medical schools. On the other hand, the educational gap has been rapidly closing. Granted that differences between medical schools exist, practically all active physicians are graduates of Class A schools. More important than this, the final stamp of medical excellence is now placed in the postgraduate years of residency training.

Since World War II the number of residents has risen almost exponentially. In 1941 there were 5,250. In 1962 there were 29,500. Of this total, 22,000 were graduates of American and Canadian medical schools, and 17,600 were in university-affiliated hospitals. Eleven per cent of all the physicians in the United States in 1962 were interns or residents.[37]

What has been the impact of this educational revolution on the practice of medicine? Since 1952, 84,869 new licenses to practice have been issued in the United States.[38] Since 1952, the final arbiters of medical preparation, the 19 American specialty boards, have issued 45,944 certificates.[37] Assuming that these are not identical but comparable pools of doctors, 54 per cent of the medical crop of the last decade has been certified for specialty practice.†

I do not mean to imply that possession of a board certificate imparts divine wisdom or that physicians with fewer years of postgraduate education do not have equal intelligence and depth of insight. I do believe, however, that one can use this large number of Board-certified men as an index of the number of men now entering practice who have certain attributes in common. They have invested a median of three and six-tenths years in residency training,[39] years in which they have been deeply immersed in modern, scientific medicine. With such indoctrination they should not let themselves retrogress, and in view of competition and professional pressures from their fellows, they cannot afford to let themselves slip. It is therefore vitally important for them to maintain an educational and technical environment in which they can practice the type of medicine for which they have been trained and can keep up with the inexorable progress in their field.

There seems to be a belief that such doctors are so highly trained and thoroughly indoctrinated that they cling to the university centers in which they were trained. This is not the case. In 1960 there were only 7,328 physicians in salaried or geographic full-time medical-school positions.[40] Since not all the latter are board-certified and recently graduated, this means that approximately 40,000 highly trained men and women have not been able to find shelter within academic walls in the last ten years. Where have they gone? Less than half the recently trained specialists are now settling in cities of more than 100,000 population, and a reliable sample indicates that 20 per cent of them have entered practice in towns with populations of between 5,000 and 25,000.[39] Where they have not found the technical and educational environment that they must have, they have been able to create it. The hospitals in the suburbs, smaller towns and cities, once marginally staffed and poorly equipped, are reaping a harvest of these well trained young men and women and developing into community medical centers that provide first-class medical care. In documenting this trend Weiskotten[39] states, "If this trend toward more even distribution of limited specialists in communities of all sizes continues, it will be a significant factor in the quality of medical service available throughout the nation in the future."*

There is a regrettable tendency to measure modern medical progress in terms of betatrons and extra-corporeal pumps. The importance of scientific and technical advances is obvious, but I believe that the real measure of the progress of today's medicine is the continuous dissemination of doctors who can provide up-to-date medical care to a large proportion of the total population and not just to the people who, by geographic accident, live near metropolitan centers.

I believe that this new generation of particularly well educated physicians practicing outside university centers constitutes a "Third Force" in American medicine. Its growth is rarely recognized by those who have stayed behind in the academic centers. It has little influence yet because it has not realized its own potential. It is too widely spread, too preoccupied with the development of practice, and still too much dominated by leaders long in power in local hospitals and medical societies. Probably because of the example of its teachers, the Third Force is largely uninterested—if not hostile toward—organized medicine. Nevertheless, with one foot firmly based on advanced training in scientific medicine and the other on private practice outside the academic sphere, it bridges the gap.

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†This was further magnified by the removal from practice by death or retirement of an estimated 35,000 doctors in the same ten years.[38] It is safe to assume that this did not contain as high a proportion of specialists.

*Many decry the trend toward specialization, and there is no doubt that this has produced a maldistribution of medical care that did not exist when all care could be dispensed by a single doctor. Nevertheless, the trend has continued to the point where 78 per cent of the 1961 medical-school classes plan to enter specialty practice,[41] and there is good evidence that, with pragmatic flexibility, American medicine is adjusting itself to this in many ways, particularly the rapid growth of group practice.[42]

It is indeed a strange paradox if, with this background, a rift continues to grow between the academic and practicing physicians. Both are products of the same educational system and share similar backgrounds. It becomes more difficult for an educator to deprecate the inadequacies of an "LMD" who may have been a fellow resident and has the same education. It is difficult for a practitioner to rail at an "Ivory Tower" in which he has spent a significant proportion of his active professional life and to which he owes his present position. Undoubtedly, there are a few who go through the whole educational process with minds undisturbed. There are also those who now feel little identity with their medical schools but who, a few years ago, as students or interns, regarded the "outside LMD" with condescension. Conversions from one diametrically opposing view to another have been well documented,[43] but they are probably rather unusual. Differences in outlook will always exist between those whose primary objectives are education and research and those directly concerned with practice, but this is overshadowed by the scientific approach to medicine that they share.

I do not mean to minimize the seriousness of any conflict between academic and practicing physicians, for there is no doubt that it exists and can be documented if one cares to look for it. The conflict is more often found in localities where medical schools have recently been established. As always, it can be found between the older and the younger generation.[44] However, I object to its easy categorization as "town and gown." This medieval analogy cannot stand examination, since both "gown" and what is alleged to be "town" are products of the same educational system.

I submit that too much emphasis has been put on a schism that is not broadening but actually narrowing. The nature of this division is superficial—no longer fundamental. I believe that the present overemphasis on the problem is due to mutual myopia. Among a vocal minority of practicing physicians can be found a thinly veiled anti-intellectualism, preoccupation with "medical economics" and resistance to change. In the academic community can be found islands of intellectual snobbery, startling ignorance of the quality of practice outside the university and impatience with conservatism. These minority opinions deceive only because no one rises to contradict them.

Is it not time to de-emphasize the differences and emphasize the community of interest of all physicians? A sociologist has analyzed "the centripetal force of modern technology,"[45] but has failed to see that the centrifugal harvest of highly trained physicians is erasing the old line of division between the quality of medical care inside and outside universities and major cities. A practicing physician and a laboratory researcher may believe they have no common ground, but they fail to see that the national economy is supporting the enormous expense of the "health industry" in all its broad ramifications for one reason and one along: to obtain better patient care. Many raise cries of alarm over the passing of the general practitioner and the fragmentation of medical care, but they fail to note the growing recognition that the family and community, not the medical center alone, are the proper environment in which to study, treat and prevent disease.

The words of Dr. Councilman that opened this section show that in 1916 it was the AMA that cemented together the profession. It does so no longer, but I believe that the profession is well on its way toward a more solid basis for unity, a common educational background. Perpetuation of any fundamental rift in American medicine should be impossible, *unless it is maintained by artificial means.*

There is a danger of deceiving oneself into a belief that an irrevocable gap exists. Anyone doubting this should read the June, 1963, issue of the *Journal of Medical Education,* which is entirely devoted to the topic, and also the proposals of those who would set up two classes of physicians.[46] But the greatest danger lies in the failure of the medical profession to unite and guide the public. If it fails to do so, it will allow overwhelming political and economic forces to split up its prostrate body in the same fashion that the National Health Service has divided the British medical profession. The greatest threat to medicine today is political. Until a halt is called to the present preoccupation with a "town-and-gown" controversy which is overemphasized and already lessening spontaneously, the medical profession cannot unite to face the genuine danger.

The Future

> . . . It is not a question for the decision of the medical profession whether or not [medical insurance] laws shall be put in force. That is a question for economic groups and forces outside of the medical profession. It will be decided when labor and industry agree together sufficiently to demand it of the legislative bodies of the various states. It is, however, of the utmost importance for the medical profession to be ready with constructive suggestions, to meet labor and industry half way and show

> them how the profession may give a greatly improved service . . . and receive a just remuneration in return . . . It is also for the profession to decide whether or not it wishes to carry on its existence under some form of sickness insurance or under some method of state medicine. That choice must inevitably be made.[18]
>
> Report of the Committee on Social Insurance, AMA, 1919.

This clear statement of the problem stands out across the cries and changes of nearly half a century. Can the profession once again take the positive and constructive role that was visualized? It is fortunate, after so long a time, still to have alternatives. One can continue to watch the AMA maintain its rear-guard action against the forces of history—that is, one can do nothing. But whether wanted or not, chance cannot be stopped, only directed. One can search for a substitute for the AMA, but no other organization even potentially representative of the entire profession exists, with the possible exception of the Section on Medical Care of the American Public Health Association. Even so, rivalry with the AMA would be inevitable, and the result would be even more chaotic. I believe that the only choice is to revitalize the AMA.

Suggesting that reform of the AMA is possible is usually greeted with contempt, disbelief or amusement. However, it has been seen that under different leadership, the AMA was quite a different organization two generations ago. I believe it could be again if there were certain changes in attitudes. First of all, physicians must waken to their common heritage and the realization that whatever affects one part of the profession must inevitably affect the entire profession. Here, the new Third Force has a potential influence that is as yet unrecognized by most of the leaders of the academic community, by organized medicine or by its own members.

Next, the Third Force and the academic leaders must abandon their negativistic attitude toward the AMA and fulfill their obligation as leaders. They will have to begin at the base by going to work in their local and state medical societies. The closeness of organization and unity of purpose that was so graphically illustrated at the hundred and eighty-first annual meeting of the Massachusetts Medical Society gives the academic community a strength out of proportion to its numbers, but this is restricted to a few counties and is perhaps better wielded at the state levels. However, if the Third Force awakens in self-recognition and organizes itself, its members will constitute a strong and growing party in almost every county medical society in the country. This means political action, pure and simple. "Politics" is not a dirty word. This is the capillary level of democratic life.

Political action such as this will bring no immediate changes. Years of hard and often dull work will be involved. Control by academic leaders will never be as complete as it was between 1900 and 1920. The Third Force can provide a broader and more representative base. It can be seen in retrospect that the solutions offered in 1915-19 also represented an extreme that failed to foresee the workability of a system of voluntary, prepaid health insurance. Failure of the conservatives to modify the more extreme views of the liberals cannot be defended any more than the currently reversed solution. The genius of the democratic system rests on the ability of opposite extremes to modulate each other. *A strong minority can do this as effectively as a majority.* The result is a moderate approach that recognizes the need for gradual change. Fluctuation in policy will occur as circumstances change and the balance of power varies, but the resulting force is a predominantly positive one, not simply negative resistance.

Is it too late for reform? Perhaps it was too late in the early 1920's, when the Committee on Social Insurance disappeared and the Council on Health and Public Instruction was abolished. Perhaps it was too late in 1932, when the recommendations of the Committee on the Cost of Medical Care were scuttled. Perhaps it was too late in the mid-1930's, when the AMA grudgingly accepted the principle of voluntary health insurance. Looking back now, one can see where crucial turning points were missed. Perhaps this is the eleventh hour. Perhaps another and final turn has already been passed. No one is gifted with the historical perspective to be sure of this until more years have passed.

With so many brilliant men among its members the medical profession should not have to abandon direction of its destiny to outside forces. It is time for the natural leaders of the profession to provide responsible leadership and stop ineffective guerilla operations. It is time for them to realize that the needs of the entire profession transcend their own interests. It is time for them to recognize that opportunities for leadership exist and that they are as obligated to help fill them as they were in those equally difficult and frustrating years before 1920.

Thirty years before the "Golden Age" the AMA was also in the doldrums. In his Presidential address in 1877, Henry I. Bowditch[30] voiced a plea that is applicable today. I hope it might convince even the most dubious physicians of today that the current problems are not unique and that a solution, found once before, can be found again:

> . . . The future of this Association depends mainly upon the way in which physicians, especially the young scientific physicians of the present hour do their duty towards it. If our best men will not come up to its meetings, and work for the common good; if they stand aloof, uttering vain complaints of inferiority of our

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work, or actually scoffing or sneering at us, we shall accomplish less perhaps hereafter than we could wish. But we shall certainly live in spite of all opposition, and if we who . . . attend these gatherings are determined that . . . nothing but what is excellent shall be allowed . . . then we shall be sure of doing a really noble work, and shall be able eventually to claim and get the respect of the whole profession.

ACKNOWLEDGEMENT

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AMA Long Range Planning, 1974: Statement of Challenges and Objectives

Report of the Board of Trustees—1974

Introduction

This is the basic working document for the AMA Plan. It is the beginning stage of the formal long-range planning system adopted by the House of Delegates at the 1973 Annual Convention.

Planning is conducted at three levels within the AMA—the Board of Trustees, the six Mission Groups, and the Operating Units (councils, committees, and staff departments). For purposes of planning, each AMA activity is classified according to its purpose, or mission, and each is placed within a Mission Group. The Mission Groups—each of which includes a trustee, a member of the Council on Long Range Planning and Development, and representatives from units relating to the mission—will serve as communication links between the Board of Trustees and the Operating Units.

The planning procedure will be as follows: Each year the Board of Trustees, "Chief Planning Unit" of the AMA, will prepare an AMA Plan which identifies the major issues facing the Association over the next five years and established objectives that respond to the issues. The AMA Plan is subject to review by the House of Delegates. Within the policy framework of the Board's Plan, the Operating Units will prepare Unit Plans proposing specific program activities to achieve the Association's objectives. The Unit Plans will then be consolidated into Mission Plans by the Mission Groups. The planning cycle will be complete when the Board reviews the Mission Plans and takes action on specific programs.

The present document is but a starting point. It identifies 30 challenges facing the AMA and establishes 30 objectives that respond to the challenges. The first actual AMA plan can be developed only after the six Mission Groups have submitted their plans and after the Office of Finance, working with the Operating Units, has presented cost figures to the Board.

The challenges and objectives presented in this paper have been organized along Mission Lines. The Mission Groups are Quality Assurance, Promoting and Effective Delivery of Care, Scientific Service to Physicians, Direct Service to the Public, Strengthening the AMA as an Organization, and Representing the Profession. Two Missions—Strengthening the AMA as an Organization and Representing the Profession—are dealt with first because they are basic to the AMA's ability to pursue the other missions. Each challenge and objective is numbered for ready reference.

Strengthening AMA as an Organization

The continuance of the AMA as a viable organization is a prerequisite for all other AMA activities. In strengthening AMA as an organization, three factors must be considered: (1) membership strength, (2) organizational structure and relationships, and (3) financial, manpower and other resources.

Challenge 1: Membership has fallen off in recent years; only in the past year has it begun to increase again. Factors contributing to membership decline include the 1971 dues increase, the dropping of unified membership in several states, the tendency of some physician groups (primarily those in non-office based activity and young physicians) not to be attracted to AMA membership, and the tendency of physicians to take benefits for granted unless new ones appear occasionally. Until late 1972, there had been no federation-wide program of membership recruitment and retention. Since most of the AMA's membership is through state and county medical societies, the AMA has had a diverse set of factors to deal with in designing membership campaigns.

Objective 1: To establish a comprehensive, federation-wide membership program that standardizes membership criteria and procedures, and to expand the membership benefits package as appropriate.

Challenge 2: Of particular concern to an association is whether its internal organizational structure provides a policy-making mechanism which represents all segments of the membership and yet is operationally efficient. The AMA is a federation of state and county societies. However, there is continuing pressure from other, non-geographically based groups for expanded representation. AMA must decide whether to maintain the original federation concept based primarily on geographic distinctions or whether to expand the federation to include more representation from all significant medical organizations.

Objective 2: To evaluate the federation structure, develop a set of principles representing the underlying philosophy and purpose of the AMA structure, and establish a set of criteria for evaluating proposed future modifications of the AMA structure.

Challenge 3: During the 127-year history of the AMA, the roles and responsibilities of the President, Vice President, Chairman of the Board, and Executive Vice President have changed in response to changing times, issues, and organizational factors. The specific roles and responsibilities of these officers are now sometimes difficult to distinguish.

Objective 3: To delineate clearly the roles and responsibilities of key offices in preparation for meeting the complex and critical issues of coming years.

Challenge 4: As the number and complexity of issues facing the AMA have increased, it has become more difficult to assess the needs and desires of the membership and to coordinate programs at the national, state and local levels.

Objective 4: To expand and improve the AMA's ability to sense the needs of the membership, and to expand AMA's base of program support by more closely involving state, county and specialty societies in the development and implementation of AMA programs.

Challenge 5: The sources of AMA revenue do not vary automatically with changes in the economy (e.g., inflation) or with the level of AMA activity (i.e., new programs produce new expenditures but usually do not provide additional revenue). Only one source of AMA revenue, membership dues, can be directly varied to provide increased income. Advertising revenue has shown annual decreases from the high of $13 million in 1967 to the low of less than $9 million in 1972. Although advertising revenue is expected to increase to about $10.2 million in 1974, income from this source is not expected to improve dramatically in future years.

Objective 5: To develop new revenue sources, particularly ones that can respond to general economic trends and changes in the level of AMA activity.

Challenge 6: The goals of the AMA are not financially measurable and the units of the organization are not evaluated solely on the basis of income or expense. Therefore, the criteria for setting priorities, creating new programs, increasing or decreasing existing programs, and eliminating programs are less well defined than those of a business organization.

Objective 6: To seek to develop specific program criteria to assist in the task of resource allocation and to study the alternative of doing fewer things and doing them better.

Challenge 7: The AMA's ability to meet the challenges of the future will depend, in large part, on its success in attracting and retaining a well-qualified staff. It is conceivable that a competitive position can best be achieved by maintaining a smaller, highly qualified and better paid staff.

Objective 7: To maintain and strengthen the AMA as an attractive and competitive employer.

Challenge 8: The AMA has unique non-scientific informational assets in the form of the physicians' record system and various data bases. These constitute a major potential source of influence and revenue.

Objective 8: To expand and fully utilize the AMA's non-scientific informational resources.

Representing the Profession

One of the most important functions of the AMA is to act as the profession's national spokesman to the public, the government, and other professional and industrial organizations. This function involves not only the development of policy on public issues but the perfection of communications techniques to convey the profession's views. It includes activity with state and county societies, so that the profession's views are made known with maximum impact at all levels.

Challenge 9: In the coming years, the AMA will continue to face the direct threat of legislation that interferes with the physician's responsibility to his patient. Such legislation usually interjects one or more third parties into the physician-patient relationship, thereby interfering with the delivery of care and infringing on the physician's independence and self-determination as a practitioner. Moreover, the use of administrative mechanisms to establish external controls over medical practice has intensified in recent years. Administrative controls can be established more easily and quickly than legislative controls, and more frequent use of this technique is to be expected.

Objective 9: To develop a long range strategy to maintain the physician's position of responsibility to his patient rather than to any third party. This strategy should take into account all forces, public and private, that impinge on the primary responsibility of the physician to his patient. It should include programs, undertaken with state medical societies, to bypass the federal government and accomplish objectives through state legislation.

Challenge 10: The imposition by government and other third parties of more and more controls on the practice of medicine has led to the need for a direct form of representation for physicians in matters concerning local hospitals, governmental bodies, and insurance plans.

Objective 10: To establish a program to identify and meet the need for AMA assistance to local medical societies in acting as negotiating agents for physicians on local issues involving third parties of all types.

Challenge 11: The increased cost and reduced availability of professional liability insurance have created a nationwide problem that affects not only the personal life of the physician but his practice of medicine as well.

Objective 11: To develop a major campaign to alleviate the professional liability problem, including such factors as the incidence of suits and the cost and availability of insurance.

Challenge 12: The public's opinion of large institutions has slipped in recent years. Although medicine continues to lead all other leadership groups in public esteem—with such institutions as government, the press, and labor unions ranking far below—it is important that efforts be made to bolster confidence. The effort cannot succeed without the participation of individual physicians as well as the societies that represent them. The individual physician's relationship with his patients and his participation in community affairs, together with the local medical society's responsiveness to public issues, are vital factors in this work.

Objective 12: To continue to develop positive programs in the public interest, with the cooperation of state and county medical societies; to continue to inform the public of the beneficial nature of medicine's many scientific and legislative activities; and to seek new methods of bringing the AMA's work to the public's attention.

Challenge 13: All legislative programs that relate to health or to the medical profession are part of the AMA's legislative program. This includes legislation initiated by the AMA. So far in the 93rd Congress, the AMA has testified more than 65 times on a wide range of subjects. In addition, many state legislative programs have taken on national importance and there are many federal-state efforts that require attention at all levels of organized medicine. The increased number and complexity of legislative issues in recent years has resulted in the need for an expanded base for legislative activity. All of organized medicine must participate actively in the development and implementation of legislative programs so that these positions can attain broader, more unified, and more visible support. There is also the need for more rapid development of legislative positions and for quickly communicating these positions to congressional and other government leaders, to the physician population, and to the public.

Objective 13: To increase AMA's legislative effectiveness, paying particular attention to federation-wide legislative program support; to improve communications on AMA positions with the membership, Congress, and the public, and to establish a coordinated program with state and county medical societies to deal with the increasing number of state legislative proposals that have national implications and significance.

Challenge 14: The increasing number of medical organizations has sometimes clouded the AMA's role as the major spokesman for the medical profession.

Objective 14: To clarify the position of the AMA as the primary spokesman for all of organized medicine, especially on issues of national scope and significance.

Challenge 15: The AMA shares many problems and concerns with other health-related organizations and with the industrial and business community in general. Liaison with these groups is vital to the success of many AMA objectives.

Objective 15: To strengthen relationships with other organizations and to expand the number of such relationships as a means of providing greater service to the public and of attaining additional support for AMA programs.

Assuring Quality

Quality assurance is one of the major functions of the AMA. A basic prerequisite to quality care is the competence of the medical profession, and one of the priorities of the Association has always been to make the product of the U.S. medical education system the best in the world. But quality assurance extends beyond medical education and into the environment of medical practice. It includes accreditation activities in health care facilities, ethical principles to protect the high standards of the profession, peer review, and efforts to expose the dangerous practices of quackery.

Challenge 16: With the expansion of medical education and the growing number of organizations involved in educational policy, the AMA's leadership role has changed. It is now only one of several organizations represented on the new Coordinating Council on Medical Education. The role of the AMA within such a structure and its relationship to other participating organizations need to be redefined and reaffirmed.

Objective 16: To continue the appropriate leadership role for the AMA in medical education, especially as it pertains to the new inter-agency groups that have been formed and are being proposed.

Challenge 17: The issue of physician certification and licensure centers on whether state licenses and specialty board certificates should be issued for a specified time only and, if so, what mechanism for relicensure and recertification should be instituted. Regarding licensure in the allied health professions, the AMA (and AHA and HEW as well) is concerned that licensing laws not be passed until the roles and responsibilities of the new allied health professions become established. Licensure laws tend to constrain the natural evolutionary process. There is also some concern that licensure of some of the new professions may lead to attempts to establish independent practitioner status with adverse effects on the quality of medical care.

Objective 17: To maintain and strengthen the AMA leadership role in the certification and licensure of the medical profession and the allied health professions.

Challenge 18: It is necessary to establish a continuing medical education program that responds to the diverse needs of the profession. There are more than 60 major specialty categories, each with special needs. One mechanism for assessing continuing education needs is the monitoring of quality of care through peer review systems. This is the most meaningful and important aspect of peer review. Another mechanism is self-assessment. Various types of self-assessment programs have been developed, primarily by the specialty societies.

Objective 18: To develop a comprehensive long range program of continuing medical education. It should include self-assessment and peer review as measures of need and evaluation.

Challenge 19: Organized medicine, at both the national and the local level, has been instrumental in the development of peer review. However, the legislation currently being implemented by the federal government does not conform to the AMA's view of the role and function of peer review. Of particular concern is the lack of balance between cost, utilization, and quality. Also of concern is the potential for inappropriate non-provider participation in the review process. Medicine faces the challenge of establishing a peer review mechanism that is truly peer-oriented, a mechanism that will serve the composite function for which it is intended and not become merely a third-party instrument for the solving of financial problems.

Objective 19: To develop a formal long range strategy to establish and maintain the control of peer review within organized medicine.

Promoting the Effective Delivery of Care

Many of the major issues facing medicine in the next decade will involve the delivery of medical care and the various aspects of the delivery system. Recent statutes and legislative proposals have set the stage for considerable activity on these issues, and there are numerous problems and opportunities facing the AMA.

Challenge 20: At the present time there is no focal point for problem-solving in the area of health care delivery. The AMA has an information base, a research group, and the ability to translate solutions into sound legislative proposals. It has the means of getting direct input from providers and giving the problem-solving process a basis in practicality.

Objective 20: To establish the AMA as a leading innovator of new mechanisms to improve the effectiveness and efficiency of health care delivery, and to establish with local medical societies a program to expand the role of the local society in solving community health problems.

Challenge 21: During the next decade, much attention will be focused on health manpower. Although the physician population has been increasing faster than the general population, there continues to be an imbalance between the supply of medical services and the demand for those services. The enactment of a national health insurance law would stimulate more demand and make manpower a prime subject for legislative solution.

Objective 21: To further develop the superiority of AMA's expertise in the health manpower area, including collection and dissemination of data; evaluation of supply and distribution; identification and analysis of manpower requirements; and development of solutions to manpower problems.

Challenge 22: The various means of financing health care have been the source of much controversy in recent decades. The major challenge currently facing the AMA in this area is national health insurance. Through Medicredit a firm position from which to influence legislative activity has been established. Strong efforts, coordinated throughout the federation, will be necessary on short notice.

Objective 22: To develop a formal long-range strategy to maximize organized medicine's input into any possible national health insurance activity, including the implementation of administrative regulations and procedures.

Challenge 23: The relationship between physicians and hospitals has undergone changes as the location of health delivery has moved more and more toward a hospital setting. Complex issues have developed regarding the roles, responsibilities, liability, and authority of the hospital and its medical staff.

Objective 23: To develop a long-range program to address the issues concerning physician-hospital relationships and the role of the physician in the hospital.

Challenge 24: The business aspects of medical practice have become increasingly complex in recent years as government and private insurance programs have become more diverse and as the general business environment has become more sophisticated.

Objective 24: To establish a program to inform physicians of new management techniques that will improve the efficiency of their practice.

Challenge 25: The growth of computer technology in the past 30 years has had a major impact on the health delivery system. The computer has the potential of increasing the efficiency of medical practice and also makes possible large data bases useful in efforts to improve health care delivery.

Objective 25: To establish a leadership role in the area of computer applications in medicine, including the development and general acceptance of standardized nomenclature; and to establish standards for the appropriate content, use and confidentiality of large computerized data banks.

Scientific Service to Physicians

The AMA's scientific program provides information to the profession, keeping physicians up to date on recent developments; and its many participants advise the Board of Trustees and the House of Delegates on scientific issues that call for policy decisions.

Challenge 26: With the trend toward more specialized scientific-medical knowledge, these tasks have become increasingly complex in recent years. The AMA's scientific publications and scientific meetings face increased competition, and both may be further affected by the rapid growth in communications technology.

Objective 26: To establish the AMA as the unquestioned leader in scientific-medical publishing through JAMA, the specialty journals, and books and pamphlets; to strengthen the AMA's program of scientific meetings and exhibits, reaching as many physicians as possible on topics that cut across the traditional lines separating the various medical and surgical specialties; and to develop a position of preeminence in the application of new techniques for communicating scientific information.

Challenge 27: The format and content of AMA scientific meetings is under continuing evaluation. Prospects of recertification in some specialities and relicensure in some states, as well as requirements for membership in some state medical societies, have led to physicians' increasing interest in active learning through comprehensive review courses.

Objective 27: To expand and improve continuing education opportunities at AMA conventions and other AMA scientific meetings.

Challenge 28: The service of the AMA in providing scientific information does not consist only of collection and dissemination; there is an evaluative and analytic aspect as well. The profession requires a reliable monitoring mechanism to identify scientific issues, so that policy positions can be developed as guides to physicians and the public.

Objective 28: To expand the AMA's ability to identify and evaluate scientific-medical developments, and to maintain the AMA's activity in formulating policy positions on scientific problems.

Direct Service to the Public

The AMA's activities in the areas of quality assurance, delivery of care, and scientific advancement ultimately benefit the public by enhancing the physician's ability or improving the medical environment. There are, however, some AMA programs that are directly aimed at the public.

Challenge 29: The AMA must continue to help people prevent health problems and become better-informed consumers of health and medical services.

Objective 29: To expand the AMA program of health education to the public.

Challenge 30: The AMA federation has a responsibility to provide its expertise in helping to solve social problems that have a relationship to health.

Objective 30: To expand the AMA's ability to provide leadership for state and county medical societies in helping to solve community health problems.

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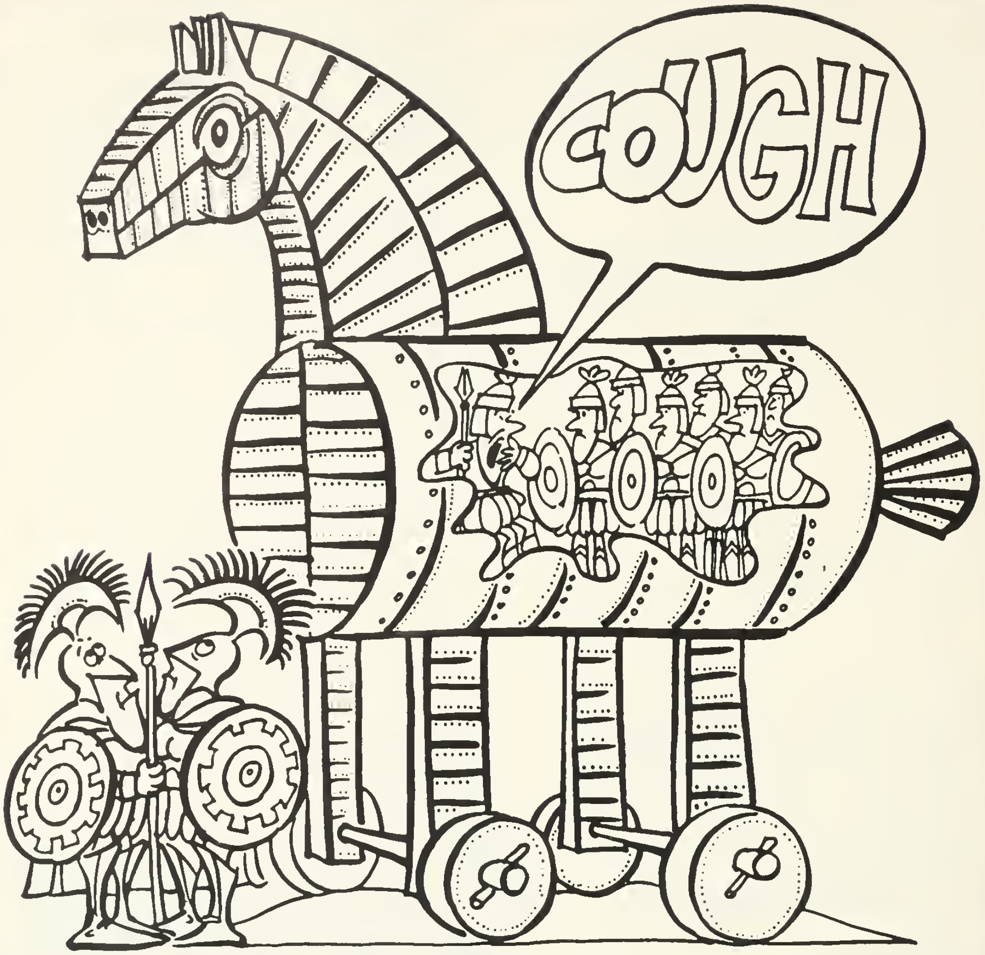

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Francis G. Sweeney
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Executive Director
Josephine P. Lindquist
Associate Executive Director

Leonard R. Tomat
Assistant Executive Director
Scientific Activities

Summary of Actions
Council Meeting

Wednesday, September 11, 1974

I. Attendance

Present in addition to the Chairman, Dr. D. A. Grendon, were: Drs. Root, Jr., Van Syckle, Spitz, Brandon, Nolan, Gardner, Fabro, Bradley, Cramer, Granoff, Hecklau, Rubinow, Ragland, Jr., James, Freedman, Krinsky, Dambeck, Harkins, Mendillo, Eslami, Barrett and Klare.

Also present were: Mrs. Lindquist, Mr. Tomat, Mr. Sweeney and Dr. Richards.

Absent were: Drs. Johnson, Backhus, Hess, Roch, Kamens, McGarry, Canzonetti, Sadowski, Magram and Hastings.

II. Routine Business

Approval of Minutes

As published and distributed, it was VOTED to approve the minutes of the meeting of August 15, 1974.

Life Memberships

It was VOTED to approve applications for Life Membership received from the following eligible Active Members:

C. Louis Fincke, 21 Broad Street, Stamford
Saul H. Sherman, 27 Bridge Street, Stamford
Maurice B. Thompson, 2068 Bridgeport Avenue, Milford
David Waugh, Sharon

Date of Next Meeting

The Chairman set the date for the next meeting of the Council to be Thursday, October 24, 1974. Tentatively, the date for the meeting to follow the next meeting was set to be Wednesday, November 6, 1974.

III. Old, New and Special Business

Reports—Fiscal Subcommittee

It was VOTED to act on a series of reports and recommendations presented by the F.S. as follows:

(a) *Typewriter for Journal Editor:* To approve the recommendation of the Subcommittee that the sum of $159.00 be expended for the purchase of a portable electric typewriter for the use of the Editor.

(b) *AMA 2nd National Congress on Health Manpower, Chicago, 10/31 - 11/2/74:* To approve the recommendation of the Subcommittee that approximately $300.00 be authorized as reimbursement for a CSMS representative to attend this Congress. It was further VOTED to designate Kenneth F. Brandon, Hartford, as the CSMS representative to attend.

(c) *Committee to Study Perinatal Morbidity and Mortality:* To approve the Subcommittee's recommendation that an allocation of approximately $85.00 be made to the 1974 budget of the Committee to cover the costs of reproducing copies of a document on perinatal health for distribution to the participants in a discussion conference being planned by the Committee.

(d) *Committee on Public Relations; Nahum Award for Medical Writing by Students:* To approve the Subcommittee's recommendation that approximately $300.00 be allocated to the budget of the PR Committee to cover the anticipated costs of implementing this award program in 1974-75 for students attending Yale and UConn Medical Schools.

(e) *Committee on Public Relations; Nahum Award of Medical Writing by Interns, Residents and Fellows in Connecticut Hospitals:* To approve the Subcommittee's recommendation that this proposal of the Committee be referred back to the Committee for further study and report with the objective of reducing the estimated costs of the program as a separate entity by sharing them with those of the similar award program for medical students (See (c) preceding).

In conjunction with taking actions on the two awards programs, the Council further VOTED that the feasibility of bringing these programs to the attention of Student Members of the Society be explored and implemented in both programs if found to be feasible.

(f) *Committee on Public Relations; "Sports Medicine" Publication:* To approve the Subcommittee's recommendation that an estimated $1,950.00 be allocated to the Committee's budget for the purpose of preparing, publishing and distributing a four page publication, which would stress preventative measures concerning athletic injuries, for the guidance of college, university and high high school athletic coaches throughout the state. The publication will be published four times a year at the beginning of each athletic season and would carry information about injuries in each of the sports played during those seasons.

AMA "Uniform Health Insurance Claim Form"

It was VOTED to receive as information a copy of the "Uniform Health Insurance Claim Form" and a report from the chairman of the Committee on Third Party Payment, S. Pearce Browning, III, recommending the use of the form. It was also VOTED to receive as information a copy of a letter from Mr. Raymond T. Sullivan, Jr., of the AMA Field Staff, informing the Council that the AMA House of Delegates had adopted a resolution at its Chicago meeting in June, which requested that the AMA work with third parties and State Medical Societies to bring about acceptance of the uniform insurance form. It was further VOTED that CSMS endorse the claim form and that its existence be brought to the attention of the membership of CSMS and its source and availability be emphasized; also that the Committee on Third Party Payments be requested to consult with the State Insurance Commissioner regarding the best method of promulgating acceptance of the uniform insurance claim form in Connecticut.

Report—Subcommittee to Study and Revise the Bylaws

It was VOTED to accept for filing a report of the Subcommittee on a matter referred to it by the Council, concerning changes in the Bylaws which would prevent or deter large accumulations of previously unseen new business from being presented to Delegates as regular business at the time of registering for the meeting of the House. After minor amendment in the changes recommended by the Subcommittee, it was VOTED to approve the amendment and transmit it to the House of Delegates meeting on November 20 for tabling and subsequent action at the meeting following. The full text of the amendment follows:

AMENDMENT

ARTICLE V—HOUSE OF DELEGATES

Section 12. Procedure

Par. 3. RESOLUTIONS. Resolutions may be introduced by any Active or Life Member of The Society, in compliance with the following provisions.

a. All resolutions, reports and similar items of business submitted in writing and received at the office of the Executive Director not later than thirty days before the date scheduled for for that meeting shall be considered as regular business of the House of Delegates.

b. Component county associations whose meetings are held later than thirty-five days prior to the date of the House of Delegates shall be allowed five days after the close of such meeting in which to submit resolutions, reports and similar items of business to the Executive Director's office and still have such material considered as regular business. In no event, however, may such resolutions, etc. be considered regular business if they are received later than fifteen days prior to the date of the meeting.

c. Reports, recommendations, resolutions or other new business may be presented to the House of Delegates by the Council of The Society at any time and shall be considered as regular business.

d. Any business which does not qualify as regular business in accordance with the foregoing provisions may be accepted for consideration by a majority vote of the delegates present and shall be referred at once by the Speaker to a reference committee. When business is introduced under the provision of this paragraph the vote shall be taken without debate, except that the introducer shall be allowed not more than two minutes to explain why it should be considered as regular business.

Report—Connecticut Medical Institute

It was VOTED to accept for filing a document furnished by the CMI Executive Director which recounted some of the activities undertaken or being undertaken by the Institute and the actual or estimated costs of same. The report engendered considerable discussion among members of the Council, but it was VOTED to table two motions which would have requested specific information about implementation of the CMI program and CMI personnel and fiscal policies, and, finally, it was VOTED to table further consideration of the entire matter.

Report—CRMP

It was VOTED to receive as information a brief verbal report presented by Morris A. Granoff, New Haven, on the present status of CRMP. Dr. Granoff

PROPOSED AMENDMENTS TO THE BYLAWS RE JUDICIAL COMMITTEE

Introduced by the Council

At the House of Delegates meeting on April 30, 1974, the Council filed a preliminary subject report with the recommendation that the House accept the report as a "statement of intent" to revise the Bylaws re Judicial Committee disciplinary procedures and with the pledge that a definitive subject report would be transmitted to the House for adoption at the 1974 semi-annual meeting. The Delegates approved the preliminary report, noting the conditions stipulated by the Council, and placed the "statement of intent" to amend the Bylaws on the table until the next meeting.

The proposed amendments are published herewith, in accordance with the Bylaws that they "be published in Connecticut Medicine on one or more occasions prior to the next meeting . . . . at which meeting the amendments shall be taken off the table and acted upon by the House of Delegates."

SUBJECT:
PROPOSED AMENDMENT TO THE BYLAWS RE JUDICIAL COMMITTEE

Introduced by the Council

PURPOSE

To clarify the provision in the Bylaws which describes the procedures to be followed in hearing appeals from the disciplinary decisions of the component County Medical Associations.

AMENDMENTS

(The amendments consist of two sections. The first section is identified as "I. Proposed Bylaw Changes." The second section is identified as "II. Duties and Composition of the Judicial Committee." The latter does not relate to the Bylaws but to the charge of the Judicial Committee as maintained on file in the Executive Director's office.)

I. Proposed Bylaw Changes

Judicial Committee Disciplinary Procedures (Article XIV, Section 7)

Par. 1. Original Jurisdiction.

In its disciplinary proceedings other than appeals from acts of component associations, the Judicial Committee shall afford to the Member whose conduct is involved the following rights in protection of his honor and professional reputation and the fairness of the proceedings:

(a) A written statement as to the nature and source of the charges made against the Member;

(b) One or more hearings before the Judicial Committee, each such hearing to be held upon not less than 10 days' prior written notice to the Member;

(c) At each such hearing, the right to be present and to be advised by a medical colleague and by legal counsel, to present witnesses and other relevant evidence, to cross-examine witnesses testifying against him, and to present oral argument.

Par. 2. Appeals from Component Associations.

(a) Any member of the Society who is aggrieved by disciplinary action of the component association of which he is a member shall have the right of appeal to the Judicial Committee of the Society, which shall review the proceedings and render a decision as herein provided.

(b) Each component association, upon taking such disciplinary action, shall send to the Member by registered mail, written notice thereof and of his right of appeal under this Paragraph.

(c) Execution of such disciplinary action shall be automatically stayed during the 15 day period provided for in subparagraph (e) (i) of this Paragraph and also, unless the component association otherwise provides, during the period of the pendency and disposition of an appeal to the Judicial Committee.

(d) The members of the Judicial Committee shall be impartial to the parties and to the substance of the charges. Therefore, if anyone shall disqualify himself or, for cause on challenge, shall be disqualified by vote of one-third of the members of the Judicial Committee present and voting, the Chairman of the Council and the President of the Society shall appoint a substitute.

(e) The procedure for taking and perfecting such an appeal shall be as follows:

(i) Within 15 days following receipt of notice of the action of the component association the

Member shall file with the Executive Director of the Society an original and two copies of a Notice of Appeal personally signed by the Member, which shall reasonably identify the component association concerned and the action from which the appeal is taken.

(ii) Within 10 days following receipt of such Notice of Appeal, the Executive Director shall send one copy thereof to the Secretary of the component association and one copy to the Chairman of the Judicial Committee.

(iii) Within 30 days following its receipt of such Notice of Appeal, the component association shall file with the Judicial Committee a concise summary statement of the case, stating the charges against the appellant, the findings of fact, and the penalty imposed, all as determined by the disciplinary body or official of the component association, and shall at the same time file a copy of such summary statement with the appellant.

(iv) Within 30 days following receipt of such copy of such summary statement the appellant shall file with the Judicial Committee a reply statement specifying the procedures, findings of fact, conclusions or penalties which the appellant intends to controvert or challenge, and shall at the same time send a copy of such reply statement to the Secretary of the component association.

(v) Within 10 days following receipt of the appellant's reply statement, the Judicial Committee shall set a date for a hearing on the appeal and shall give written notice of the date, time and place thereof to the appellant and the component association, which date shall be not less than 10 days nor more than 30 days after the date such notice is given.

(f) The procedure for hearing and decision on the appeal shall be as follows:

(i) The appellant and the component association, through its proper representatives, shall each have the same right to be present, to be advised and counselled, to cross-examine witnesses and to present oral argument as is provided in Paragraph 1 of this Section with respect to hearings by the Judicial Committee in original jurisdiction cases.

(ii) At any time prior to the conclusion of the hearing the appellant and the component association may submit written briefs, accompanied by such documentary evidence as may be relevant, as to his or its position and claims, serving a copy thereof on the other party. No reply brief shall be filed by either party except upon prior leave of the Judicial Committee.

(iii) The Judicial Committee shall determine the procedure at the hearing, including the time allotted to each party and the order of presentation.

(iv) Except as the Judicial Committee shall determine under exceptional circumstances that it is necessary in order to prevent a miscarriage of justice, neither the appellant nor the component association shall present the direct testimony of individual witnesses.

(v) For cause shown and upon reasonable notice, the Judicial Committee may postpone, adjourn or continue the hearing if such action is by it deemed necessary to a full and fair review of the case.

(vi) The Judicial Committee, upon written request received at any time prior to the expiration of the period of time herein limited for any action to be taken by any party to an appeal, may extend for such period as it may deem reasonable the time limited for such action. Failure of a party to take any such action within the period so limited therefor (including extensions thereof, if any) shall be grounds for dismissal of the appeal, as to the appellant, or its remand to the component association under subparagraph (g) (iii) of this Paragraph, or for the Judicial Committee to proceed with a hearing of the appeal as provided in subparagraph (e) (v) of this Paragraph.

(g) The disposition of the appeal shall be made in accordance with the following rules:

(i) The Judicial Committee shall not try the case *de novo*, but shall sit as a Board of Review and shall dispose of the case upon its determination of the following basic questions:

A. Whether the appellant received a fair hearing before the disciplinary authority of of the component association;

B. Whether the facts found against the appellant are reasonably supported by the evidence considered by such disciplinary authority;

C. Whether the penalty imposed was reasonable.

(ii) In reaching its decision the Judicial Committee shall vote by written ballot on the three basic issues above described and upon the final disposition of the appeal. In each such vote the decision shall be rendered by a majority of the members of the Committee present at and participating in the hearing.

(iii) Unless at least one of items A, B and C of subparagraph (i) above shall be decided by the Judicial Committee in the negative, the Committee's decision shall be that the appeal is dismissed. If any one or more of such items shall be decided in the negative by the Judicial Committee, it shall remand the case to the component association under one or more of the following:

A. With recommendation as to the holding of a new hearing on the original charges;

B. With direction to dismiss the charges altogether;

C. With direction that the penalty imposed is to be reduced.

(iv) Upon rendition of its decision, the Judicial Committee shall give written notice thereof to the Executive Director of the Society and, by registered mail, to the Secretary of the component association and to the appellant, and, if the appellant is a member of the American Medical Association, notify him of his right of appeal under the following paragraph.

(v) The disciplinary findings and acts of the Judicial Committee are final, whether in exercise of its original jurisdiction or its jurisdiction in appeals from component associations. Members of the AMA may appeal such findings and acts to the Judicial Council of the AMA under AMA rules and procedures. Execution of acts of the Judicial Committee shall be stayed automatically during such period as may be authorized by the AMA for any such appeal made to the AMA, unless the Judicial Committee otherwise provides during the period of the pendency and disposition of such appeal.

(h) All periods of time herein prescribed for sending or filing any notice or other document shall be determined by the U.S. Postal Service postmarked date on which such notice or document is mailed.

Par. 3. Expulsion and Suspension.

An Active Member shall be expelled or suspended, as the case may be, upon receipt by the Executive Director of written certification by the Chairman of the Judicial Committee setting forth:

(a) That the Judicial Committee has found, after due notice and hearing, as provided in Paragraph 1 of this Section, that the Member has been convicted by final judgment of any Court, of a criminal offense which is punishable, irrespective of the punishment which in fact is imposed for such conviction, by imprisonment for a term of one year or more in a penal institution of the United States, of this State or of any other State; and

(b) That the Judicial Committee has determined that the Member shall be expelled or shall be suspended for a specified term, not to exceed two years, from Active Membership.

The Executive Director, within 10 days of receipt of such written certification, shall send a copy thereof to the Secretary of the component association of which the expelled or suspended Active Member is a member.

II. Duties and Composition of the Judicial Committee

Original:
To interpret the Charter, etc.

Original: Members of the AMA shall have those rights of AMA members. In case of appeal to the AMA, execution of any punishment imposed by the Judicial Committee may be stayed until such procedures have been exhausted according to the AMA Constitution.

New:
The Judicial Committee shall have the power to interpret the Charter, etc.
(underscored wording should be added to complete grammatical sense)

New: The disciplinary findings and acts of the Judicial Committee, whether in exercise of its original jurisdiction or its jurisdiction in appeals from component associations, shall be subject to such rights of appeal to the AMA as may from time to time exist under AMA rules and procedures. Execution of the decision or action of the Judicial Committee shall be automatically stayed during such period as may be authorized for any such appeal to the AMA and also, unless the Judicial Committee otherwise provides, during the period of the pendency and disposition of such appeal.

OFFICERS OF THE SOCIETY
1974-1975

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HILLIARD SPITZ, Vice-President	New London
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ORVAN W. HESS, Alternate	New Haven
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M. David Deren	Bridgeport	*Professional Liability*
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Philip A. Shelton	Hartford	*Legislation*
Michael R. Sharon	Rockville	*Public Relations*

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William E. Lattanzi	New Haven	*Perinatal Morbidity and Mortality*
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George Kraus	Greenwich	*Veneral Diseases Education and Control*

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Harry P. Engel	Bridgeport	*Liaison Committee with Connecticut Bar Association*
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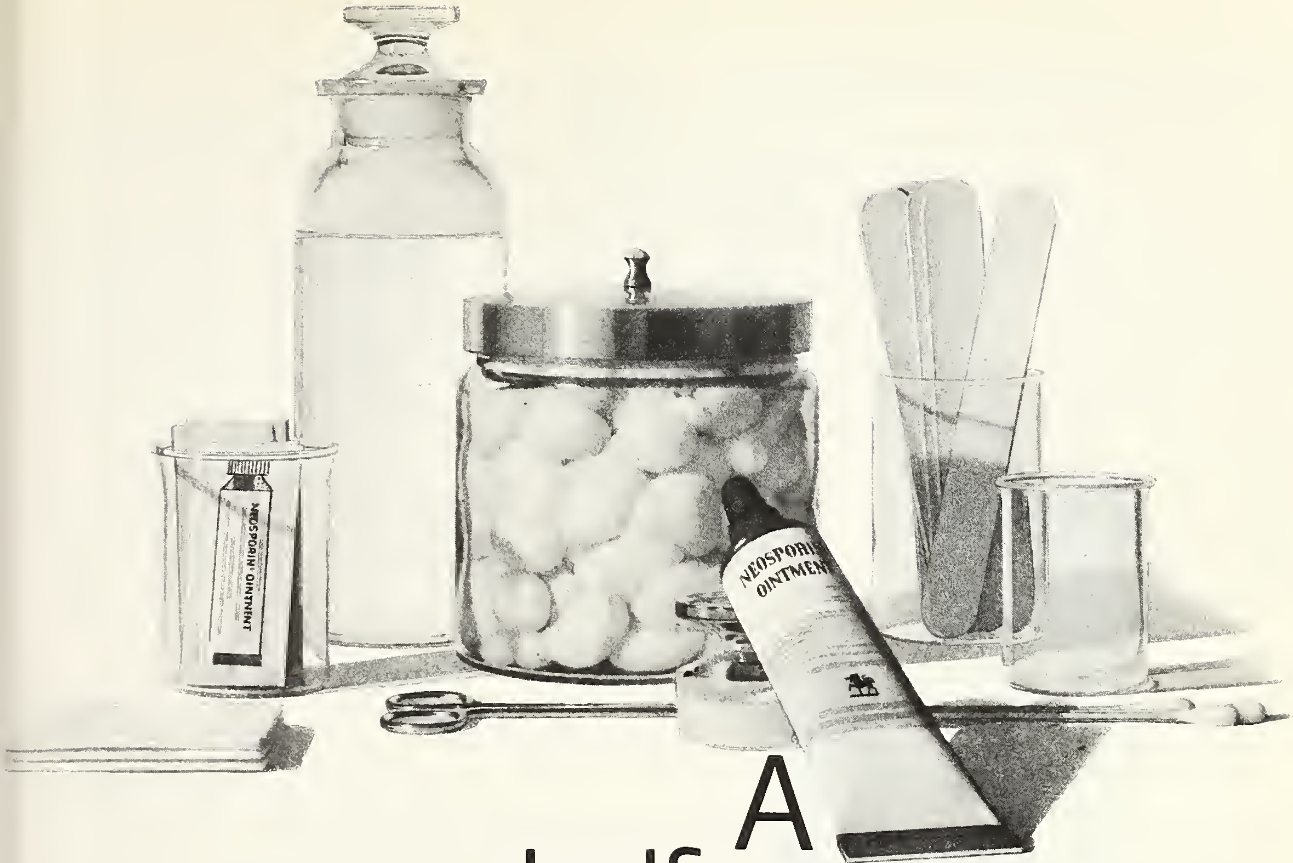
Benjamin Levy	Hartford	*Delegate to Connecticut Nutrition Council*
Joseph J. Bellizzi	Hartford	*Representative to Connecticut Advisory Council on School Health*
Kurt A. Oster	Bridgeport	*Representative Connecticut Advisory Committee on Foods and Drugs*



A half-ounce of prevention

Use it to prevent a topical infection. Or to treat one that's already started. In either case, it's good medicine. Whether for lacerations, burns, open wounds, IV catheter or surgical aftercare. Neosporin® Ointment provides broad antibacterial coverage against common susceptible pathogens. And since it contains three antibiotics that are rarely used systemically, the risk of sensitization is reduced. Neosporin Ointment. A half-ounce of prevention. Also available in a full ounce of prevention and in convenient foil packets.

Neosporin Ointment carried on Apollo and Skylab missions.

Neosporin® Ointment
(polymyxin B-bacitracin-neomycin)

Each gram contains: Aerosporin® brand Polymyxin B Sulfate 5,000 units; zinc bacitracin 400 units; neomycin sulfate 5 mg (equivalent to 3.5 mg neomycin base); special white petrolatum qs. In tubes of 1 oz and 1/2 oz and 1/32 oz (approx.) foil packets.

NDICATIONS: *Therapeutically*, used as an adjunct to appropriate systemic herapy for topical infections, primary or secondary, due to susceptible organsms, as in: • infected burns, skin grafts, surgical incisions, otitis externa primary pyodermas (impetigo, ecthyma, sycosis vulgaris, paronychia) • secondarily infected dermatoses (eczema, herpes, and seborrheic dermatitis) traumatic lesions, inflamed or suppurating as a result of bacterial infection. *Prophylactically*, the ointment may be used to prevent bacterial contamination burns, skin grafts, incisions, and other clean lesions. For abrasions, minor cuts nd wounds accidentally incurred, its use may prevent the development of nfection and permit wound healing.

ONTRAINDICATIONS: Not for use in the eyes or external ear canal if the eardrum perforated. This product is contraindicated in those individuals who have hown hypersensitivity to any of the components.

VARNING: Because of the potential hazard of nephrotoxicity and ototoxicity lue to neomycin, care should be exercised when using this product in treating xtensive burns, trophic ulceration and other extensive conditions where absorption of neomycin is possible. In burns where more than 20 percent of the body surface is affected, especially if the patient has impaired renal function or is receiving other aminoglycoside antibiotics concurrently, not more than one application a day is recommended.

PRECAUTIONS: As with other antibacterial preparations, prolonged use may result in overgrowth of nonsusceptible organisms, including fungi. Appropriate measures should be taken if this occurs.

ADVERSE REACTIONS: Neomycin is a not uncommon cutaneous sensitizer. Articles in the current literature indicate an increase in the prevalence of persons allergic to neomycin. Ototoxicity and nephrotoxicity have been reported (see Warning section).

Complete literature available on request from Professional Services Dept. PML.

Wellcome

Burroughs Wellcome Co.
Research Triangle Park
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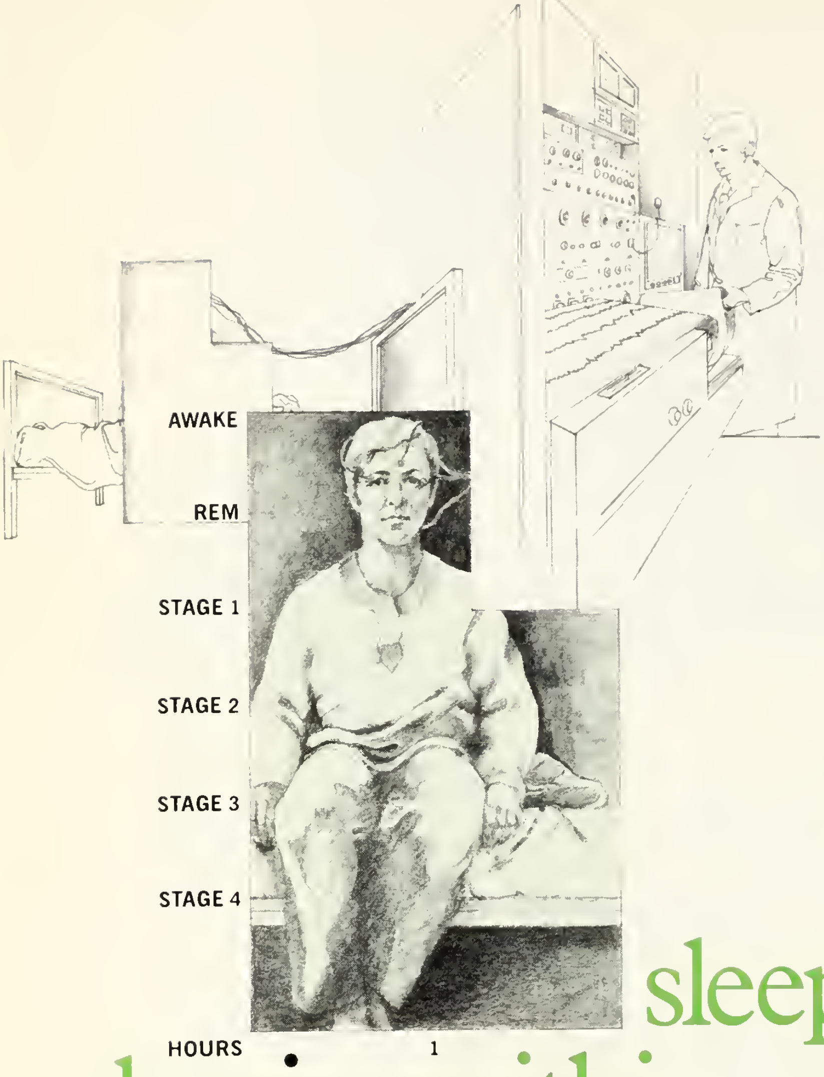

sleep begins within 17 minutes, on average... an initial benefit of

Dalmane®

(flurazepam HCl)

proved by a 22-night clinical study of insomnia patients in the sleep research laboratory and at home[1]

Three insomnia patients selected for difficulty falling asleep were administered Dalmane (flurazepam HCl) 30 mg for 14 consecutive nights. Placebo was given for four nights prior to and four nights after Dalmane. Physiologic tracings on Dalmane nights 1-3 showed sleep induction time averaged 13.90 minutes; on Dalmane nights 12-14, 18.80 minutes. Combined average for the 6 monitored drug nights was 16.35 minutes.[1]

reported that he was away at the time of the last meeting of CRMP, but that from written communications he had received from the CRMP staff, it appeared that CRMP funding was in a state of flux.

Report—Commission of Hospitals and Health Care

It was VOTED to accept for filing a report submitted by Sidney L. Cramer, Hartford, who serves on the Commission, which reported in brief that the Commission has concerned itself with hospital budgets for the past several months and has succeeded in holding hospital budget increases to less than 8.5% as compared to the national averages of 15-17%.

N.B.: *The foregoing is a summary of the proceedings and actions of the Council on Sept. 11, 1974. Detailed minutes of the meeting are on file at 160 St. Ronan Street, New Haven, for perusal by any interested member of the Society.*

pain and tension due to pain

Rapid acting analgesic-sedative for mild to moderate pain and associated tension in such conditions as

- tension headache with underlying nervous tension and anxiety
- muscular tension (e.g., sustained contraction of head and neck)
- dysmenorrhea
- postpartum pain

Each tablet contains: ½ grain Butalbital (allylisobutylbarbituric acid). Warning—may be habit forming. 1 grain Caffeine (anhydrous), 7½ grains Aspirin, 2½ grains Aluminum Hydroxide.

Kengesin™

potent buffered analgesic

Kenwood Laboratories, Inc. New Rochelle, New York 10801
developers and suppliers of I·L·X B12™ and Cebral™

Indications: Kengesin is effective for the relief of mild to moderate pain and pain due to tension associated with upper respiratory infections (sinusitis, coryza, otitis media), postpartum pain, dysmenorrhea, and pain associated with tension. Kengesin is also effective as a sedative-analgesic preparation for the relief of tension headache. Relieves pain due to sustained contraction of head and neck muscles (muscular tension), and the nervous tension and anxiety that underlie tension headache.
Kengesin is also effective for the relief of mild to moderate pain and pain due to tension in pre- and postdental surgical procedures.

Contraindications: Hypersensitivity to salicylates or barbiturates.

Adverse Reactions: In sensitive persons: drowsiness, dizziness, nausea, constipation, or skin rash may occur. Sudden withdrawal from barbiturates may cause abstinence syndrome, including convulsions.

Precautions: Excessive or prolonged use should be avoided. Do not use concurrently with other sedative-hypnotics or with alcohol.

Adult Dosage: 1 or 2 tablets, repeated if required, at 4 hour intervals, up to 6 per day.

Supplied: Bottles of 100 tablets.

SPECIAL NOTICES

YALE UNIVERSITY SCHOOL OF MEDICINE

Postgraduate Courses for Physicians 1974 - 1975

ANATOMY

Special Dissections in Anatomy (Anatomy 201) Opportunities will be provided for special dissection of a particular region or an entire cadaver. It is assumed that the dissector will have adequate background to progress satisfactorily on his own initiative. Instruction is not provided; however, special arrangements may be made for tutorial sessions and the viewing of instructional video-tapes. Insofar as space and material permit, these dissections may be scheduled at any time during the year to suit the student's convenience. Applicants should indicate the regions they wish to dissect and the length of time they wish to devote to this study. Fees will be charged to meet costs of material and laboratory expenses. Dr. T. R. Forbes.

Anatomy of the Head and Neck (Anatomy 203) Special dissections of the head and neck will be demonstrated and discussed in ten to twelve weekly sessions of about an hour each. Fees will be charged to cover expenses. Registration limited. Dr. T. R. Forbes.

PATHOLOGY

Brain Tumor Registry (Pathology 200) The Registry consists of several thousand specimens of brain and spinal cord tumors and other diseases of the nervous system, and related clinical records (particularly those of Dr. Harvey Cushing's patients). Material demonstrating classical examples of various types of intracranial tumors is studied, and once weekly a neuropathological conference is conducted during which current specimens from the Neurological and Neurosurgical Services of the Yale-New Haven Hospital are reviewed from the standpoint of diagnosis and prognosis. Opportunity for study is available to properly prepared students specializing in neurosurgery, neurology, psychiatry, and neuropathology. A limited number of full-time students only can be accommodated by individual arrangement. Fee by arrangement. Dr. E. E. Manuelidis.

RADIOLOGY

Introduction to Radiological Physics (Radiology 302) This course is designed to provide the resident physician in radiology with an understanding of the mechanisms of X-ray production, absorption and detection, that are the basis of the practice of radiology. Enrollment unlimited. Tuesdays, 4:00 - 6:00 P.M., September 10 - November 12 (10 sessions). Fee: $100. Dr. R. J. Schulz and Radiology Staff.

Physics of Diagnostic Radiology (Radiology 303) A detailed review of the physical aspects of diagnostic radiology including radiographic systems, image formations and imaging devices, film characteristics, tomography, and the effects of physical factors on radiographic quality. Radiology 302 or equivalent is a prerequisite. Enrollment unlimited. Tuesdays, 4:00 - 6:00 P.M., November 26 - February 25 (12 sessions: no classes on December 24 and 31). Fee $120. Dr. R. J. Schulz and Radiology Staff.

Clinical and Laboratory Applications of Radioisotopes (Radiology 304) After a review of radioisotype theory, basic instrumentation and laboratory methods are taught by demonstration. Clinical uses of the procedures are stressed. Prerequisites are Radiology 302 and 303 or their equivalent. Enrollment limited to available facilities. Tuesdays, 1:30 - 4:00 P.M., March 4 - May 13 (10 sessions). Fee $150. Dr. R. P. Spencer and Staff.

Physics of Therapeutic Radiology (Radiology 305) A review of the physical principles underlying the operation of X-ray therapy equipment, theoretical and practical aspects of radiation dosimetry, application of X-ray beams to therapy, application of radioactive materials to therapy, and physical aspects of radiobiology. Radiology 302 or equivalent is a prerequisite. Enrollment unlimited. Wednesdays, 4:00 - 6:00 P.M., November 27 - February 5 (10 sessions; no classes on December 25 and January 1). Fee: $100. Dr. R. J. Schulz and Radiology Staff.

Physics of Nuclear Medicine (Radiology 306) An introductory course in nuclear physics. Topics include growth and decay of radionuclides, atomic and nuclear structure, systematics or radioactive decay, counting statistics, the interaction of radiation with matter, and the detection of nuclear radiation. Radiology 302 or equivalent is a prerequisite. Enrollment unlimited. Thursdays 4:00 - 6:00 P.M., March 6 - May 22 (12 sessions). Fee: $90. Dr. R. C. Lange and the Radiology Staff.

A number of special courses and symposia are also offered throughout the year, and the regularly scheduled educational conferences of the Yale-New Haven Medical Center are open to all physicians.

Inquiries should be addressed to Office of Postgraduate Medical Education, 333 Cedar Street, New Haven, Connecticut 06510.

HARVARD MEDICAL SCHOOL

DEPARTMENT OF CONTINUING EDUCATION

25 SHATTUCK STREET, BOSTON, MASSACHUSETTS 02115—Tel.: (617) 734-3300

Course Announcements for 1974-75

All courses have AMA accreditation. AAGP accreditation where applicable.

Anesthesiology

November 16	The Pharmacology of Anesthesia (BHW)	$ 60
April 17-19	Intensive Care of the Critically Ill Patient (MGH)	$135

Emergency and Intensive Care

October 9-12	Angiography: 1974—The Angiography of Emergencies (PBBH)	$145
April 14-16	Management of Medical and Surgical Emergencies (MGH)	$175
April 17-19	Intensive Care of the Critically Ill Patient (MGH)	$135

Medicine

September thru June	Peter Bent Brigham Medical Series (PBBH)	$325
Third Friday of each month except December		
September 25	Problems in Electrocardiography (MGH)	$ 60
October 9-11	Diabetes Mellitus in Relation to General Medicine (DEACONESS)	$135
October 9-12	Angiography: 1974—The Angiography of Emergencies (PBBH)	$145
October 21-25	Current Concepts in Clinical Cardiology (MGH)	$250
November 13-15	Comprehensive Management of the Rheumatoid Patient (RBBH)	$175
November 25-27	Concepts in the Diagnosis and Treatment of Cancer (MGH)	$135
December 2-4	A Review of Common Arrhythmias (MGH)	$175
January 27-29	Current Concepts in Pulmonary Disease (MGH)	$175
February 3-5	Gastroenterology (MGH)	$175
March 3-7	Rheumatology and Metabolic Bone Disease (MGH)	$250
March 31 - April 4	Endocrinology: 1975 (MGH)	$250
April 14-16	Management of Medical and Surgical Emergencies (MGH)	$175
April 21-23	Infectious Diseases of Adults—1975 (MGH)	$175
May 2-3	Intra-Aortic Balloon Pumping (BIH)	$ 75
May 12 - June 6	Internal Medicine (MGH)	$750
May 21-23	Dermatology (BIH and MGH)	$175
May 30 - June 1	Tumors of the Thorax (DEACONESS)	$110
June 2-6	Modern Clinical Genetics (CENTER FOR HUMAN GENETICS)	$250
June 2-6	Basic Electrocardiography and Non-Invasive Techniques in Cardiology (MGH)	$250

Neurology

October 7-10	Neuroradiology (MGH)	$160
March 10-21	Neurology (MGH)	$400
March 24-28	Neuro-ophthalmology (MEEI)	$250

Obstetrics and Gynecology

September 9-20	Gynecology (MGH)	$400
September 19-21	Fetal Heart Rate Monitoring (BIH)	$125
March 10-21	Obstetrics and Gynecology (BHW)	$400
June 2-6	Modern Clinical Genetics (CENTER FOR HUMAN GENETICS)	$250

SPECIALTIES

Ophthalmology

September 3 - December 20	Basic Sciences and Clinical Techniques in Ophthalmology (MEEI)	$850
October 30 - November 2	Anterior Segment Diseases (MEEI)	$145
March 24-28	Neuro-ophthalmology (MEEI)	$250
May 22-23	Ophthalmology for the Internist, Pediatrician and General Practitioner (MEEI)	$110
May 28-30	Glaucoma (MEEI)	$175
June 5-7	Diseases of the Cornea (MEEI)	$125

Orthopedic Surgery

August 26-29	Biomechanics in the Practice of Orthopedic Surgery (CHMC)	$150
October 11-12	Concentrated Course in Total Hip Replacement (MGH)	$100
October 14-18	The Radiology of Bone (PBBH)	$200
November 13-15	Comprehensive Management of the Rheumatoid Patient (RBBH)	$175
March 3-7	Rheumatology and Metabolic Bone Disease (MGH)	$250

Pathology

October 14-18	The Radiology of Bone (PBBH)	$200
November 4-9	Pathology of the Endocrine Glands (MGH)	$265

Pediatrics

September 9-13	Pediatrics (CHMC)	$250
April 14-16	Advances in Pediatric Hematology (CHMC)	$125
May 5-9	Adolescent Medicine (CHMC)	$200
May 19-23	Pediatrics (MGH)	$250
June 2-6	Modern Clinical Genetics (CENTER FOR HUMAN GENETICS)	$250
June 3-5	Pediatric Infectious Diseases (CHMC)	$175

(continued)

Radiology

October 7-10	Neuroradiology (MGH)	$160
October 9-12	Angiography: 1974—The Angiography of Emergencies (PBBH)	$145
October 14-18	The Radiology of Bone (PBBH)	$200
November 25-27	Concepts in the Diagnosis and Treatment of Cancer (MGH)	$135
May 5-8	Abdominal Radiology (MGH)	$200
June 16-18	Head and Neck Neoplasms (MGH)	$135

Surgery

September 21	Surgical Therapeutics (BIH)	$ 45
November 4-22	General Surgery (MGH)	$600
November 16	The Pharmacology of Anesthesia (BHW)	$ 60
November 25-27	Concepts in the Diagnosis and Treatment of Cancer (MGH)	$135
January 13-15	Gastrointestinal Surgery (MGH)	$175
April 8-9	Current Problems in Thoracic Disease (MGH)	$110
April 10-11	Recent Advances in Cardiac Surgery (MGH)	$110
April 28 - May 16	General Surgery (MGH)	$600
May 2-3	Intra-Aortic Balloon Pumping (BIH)	$ 75
May 29-31	Current Management of Primary and Metastatic Chest Tumors (DEACONESS)	$110
June 16-18	Head and Neck Neoplasms (MGH)	$135

SPONSORING HOSPITALS

NOTE: The following courses are by arrangement only:

Pediatrics 1A (MGH)
Pediatrics 2A (CHMC)
Adolescent Medicine 1A (CHMC)
General Surgery 2 (MGH)
Diagnostic Radiology (MGH)
Diagnostic Radiology (PBBH)
Pediatric Radiology (CHMC)
Radiation Medicine (MGH)

Beth Israel Hospital (BIH)
Boston Hospital for Women (BHW)
Children's Hospital Medical Center (CHMC)
Massachusetts Eye and Ear Infirmary (MEEI)
Massachusetts General Hospital (MGH)
New England Deaconess Hospital (DEACONESS)
Peter Bent Brigham Hospital (PBBH)
Robert B. Brigham Hospital (RBBH)

(Write Harvard Medical School for application forms.)

In Memoriam

Howlett, Kirby S., Jr., Vanderbilt University, 1931. Dr. Howlett was a specialist in the Fairfield area since 1936, before his retirement in 1973. He was the author of numerous articles for scientific and medical journals. He was also an associate clinical professor at Yale University and a consulting physician at Yale-New Haven Hospital. He was a member of the Fairfield County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Howlett died September 8, 1974, at the age of 70.

Scholl, Robert F., Yale Medical School, 1912. Dr. Scholl was a practicing gastroenterologist in the New Haven area since 1914. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Scholl died August 25, 1974, at the age of 84.

Serafin, Eugene L., New York University, 1945. Dr. Serafin was a practicing surgeon in the New Haven area since 1954. He was a veteran of World War II and the Korean conflict, having served as a captain in the Medical Corps for two years in Korea. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Serafin died June 13, 1974, at the age of 53.

Wiedman, Otto G., University of Pennsylvania, 1905. Dr. Wiedman was a former neurologist and psychiatrist in the Hartford area since 1905. He had been a member of the Hartford Hospital medical and surgical staff since 1919 and served twice as staff president from 1939 to 1941 and from 1944 to 1945. He was a member of the Hartford County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Wiedman died July 25, 1974, at the age of 90.

Wilson, J. Alfred, Jefferson Medical College, 1919. Dr. Wilson was a practicing internist in the New Haven area until his retirement in 1968. During his practice he served as chief of staff of the Meriden Hospital (now Meriden-Wallingford Hospital) and he was former medical director of the Bradley Home for the Aged in Meriden. He was a member of the New Haven County Medical Association, the Connecticut State Medical Society and the American Medical Association. Dr. Wilson died August 10, 1974, at the age of 79.

WOMAN'S AUXILIARY

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Treasurer
Mrs. Marvin Levenstein, New Haven

WOMAN'S AUXILIARY MEETS IN CHICAGO

Connecticut's delegation to the American Medical Association's Woman's Auxiliary Convention in Chicago returned with many goals for the coming year, having been inspired not only by the convention proceedings and program, but also by the meetings with other physicians' wives and the challenging leadership communicated by the National Auxiliary President, Mrs. Howard Liljestrand of Hawaii. The four days were spent in a varied program, along with business and social activities that included receptions with a Hawaiian air. At the same time, we were all experiencing friendly personal exchanges with more than 800 other Auxiliary members from all parts of our country that is always such an important part of the Auxiliary's purpose.

Mrs. George Roch, Connecticut Auxiliary's president, took part in the State Idea Exchange. She presented a health education project, Hartford County's Medical Self-Help Training Program. Other state presidents reported projects on AMA-ERF, International Health, Legislation, Health Services, Health Manpower and Membership.

Over a million dollars was the record-breaking amount raised by the Auxiliary for the AMA-Education and Research Foundation. Connecticut's Auxiliary received an award of merit for having contributed an average of $17.38 per member, and Mrs. Joseph Czarsty, immediate past president of Connecticut, represented us at the presentation.

Reports of officers, membership awards, nominations for and election of the Nominating Committee, discussion and voting on proposed by-law changes and adoption of an annual budget were all important annual convention business. A memorial service for recently deceased members was held.

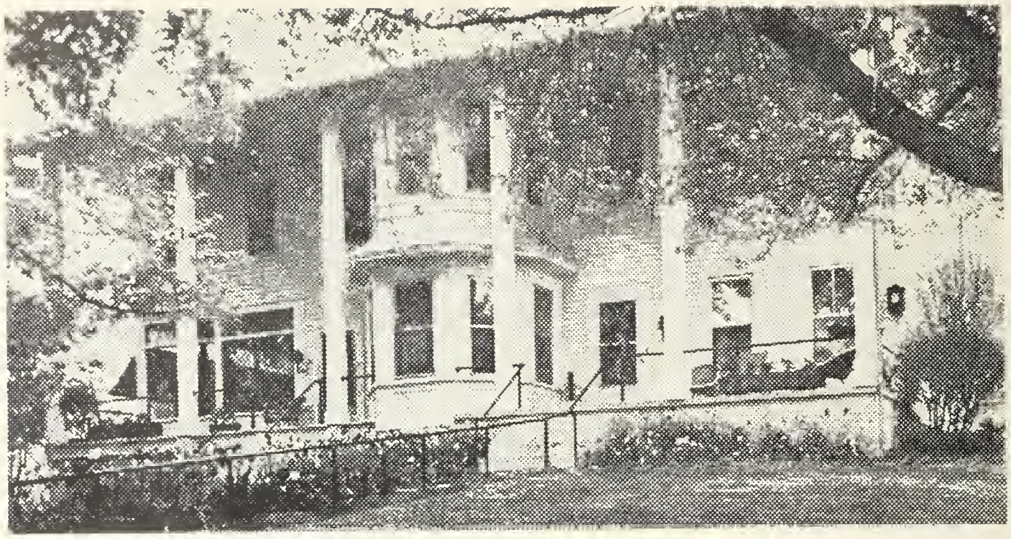
The election and installation of 1974-75 officers and directors brought Mrs. Liljestrand to the helm of the Auxiliary, with our own Connecticut Auxiliary's Mrs. Norman Gardner as First Vice-President. Connecticut delegation members were proud of their state member, who is held in such high esteem throughout the National Auxiliary. Middlesex County members Mrs. F. Erwin Tracy, Head of Connecticut's Delegation, and Mrs. Mehadin Arafeh, Connecticut's President-Elect, presented Mrs. Gardner a token of appreciation from her home county Auxiliary.

"Reach for the stars," said Mrs. Liljestrand, in her inaugural address, as she urged members to set their sights high and persevere toward greater goals for the Auxiliary. She encouraged increased membership, county auxiliaries identified as greater service groups, the promotion of health education in the schools and alertness to community needs.

Joyce Brothers, Ph.D., the keynote speaker, discussed the future of the family. Dr. Brothers cited many examples of changing trends, but she concluded, "The family remains the basic social unit in primitive cultures as well as advanced countries."

Virginia Apgar, M.D., Ph.D., recently deceased since the Chicago convention, advised every couple considering marriage to have genetic counseling to help them determine if their genes as well as their personalities were compatible. "Young persons who seek advice of genetic counselors . . . and heed it . . . could reduce the number of babies with birth defects," she said.

At this year's AMA Convention, for the first time, all 50 state Auxiliary presidents were seated in a body to the right of the main platform. They were presented to the AMA House of Delegates by its President, Malcolm C. Todd, M.D., as he recognized the important role the Auxiliary fulfills.



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The Society maintains the Physician Placement Service as a service to the medical profession in the State of Connecticut. Opportunities for physicians to locate in Connecticut will be published as space permits and will be distributed to physicians making inquiry of such opportunities. Information should be sent to 160 St. Ronan Street, New Haven, Connecticut 06511, (203-865-6822).

Physicians wishing to establish practice in Connecticut are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two consecutive issues of *Connecticut Medicine.*

OPPORTUNITIES FOR PRACTICE

(If no name is listed, contact the Physician Placement Service for more details.)

Internal Medicine

Northeastern Connecticut in search of internists. Area needs coverage.

Northwestern Connecticut: Need for primary care physicians. Several contacts.

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Internist needed for life insurance company. Contact Access Group, 111 Pearl Street, Hartford, 527-0107.

Three man internal medicine group looking for fourth. Fairfield County. Many advantages. Phone 255-3441 for details.

Associate wanted for established solo practice in family internal medicine. C. A. Crown, M.D., 194 South Avenue, New Canaan, Connecticut 06840.

Emergency Room

New Milford Hospital, New Milford, Conn. 06776, (203) 354-5531. Full-time position; 90 bed acute care hospital. Rural setting near urban centers. Contact Administrator.

Central Connecticut. Full-time position. Arthur V. McDowell M.D., Middlesex Memorial Hospital, 28 Crescent Street, Middletown, Connecticut 06457.

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Attractive shore community. Physician retiring. Community hospital. Few minutes from New Haven. Office space available. Need for primary physicians.

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(If no name is listed, contact the Physician Placement Service)

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Internal Medicine—Nephrology: Group or Associate practice. Board certified. Available July 1975. Presently Fellow in Nephrology at the Jersey City Medical Center. Interned in Meriden—Wallingford. G. A. Lipat, M.D., 255 Berkeley Avenue, No. 1A, Newark, New Jersey 07107.

Internal Medicine—Oncology: Private or Institutional Practice. Age 32. Available 7/75. Board eligible. Resident at Norwalk Hospital in 1972. Presently at Anderson Hospital in Houston. Hui-Yen Chang, M.D., 9707 Timberside No. 8, Houston, Texas 77025.

Internal Medicine: Connecticut license. Available June 1975. FLEX. Age 33. Resident at St. Mary's Hospital in Waterbury. Hospital or private practice. Haren P. Desai, M.D., St. Mary's Hospital, Waterbury, Conn.

Internal Medicine: Insurance or Administrative position. Available with reasonable notice. Age 43 years old. Board eligible. Presently in practice. Tufts and Boston City Hospital. Arthur J. Rubin, M.D., 185 Cedar Lane, Teaneck, New Jersey 07666.

Internal Medicine: General Medicine with some G.I. cases. Group or associate practice. Medium sized community desired. Available July 1975. Bilingual: Spanish, 37 years old. Presently Fellow at V.A. Hospital. Luis A. Tupac, M.D., 7142 Salem Drive, New Orleans, Louisiana 70127.

Internal Medicine: Ambulatory care. Group or institutional practice. Medium or small community desired. Princeton, Columbia P and S. Age 39. Presently in practice. Mayer R. Lightdale, M.D., 22 Robinson Street, Cambridge, Mass. 02138.

Internal Medicine: Connecticut license. FLEX. Board eligible. Prefers institutional practice. 34 years old. Available now. Sebastian P. George, M.D., 43 Woodland Park, Hartford, Conn. 06105.

Internal Medicine and Endocrinology: Available December 1974. Group practice desired. Princeton and Johns Hopkins. ABIM taken in June 1974. Maryland license. Completing Fellowship at Duke University Medical Center. John H. Machledt, Jr., M.D., 3321 Alabama Avenue, Durham, N.C. 27705.

Gastroenterologist-Internist: Available January 1975. Group Practice desired. Completing Fellowship and military service. Prefers Western Connecticut. Diplomate, National Boards: Qualified, ABIM, October 20, 1970. Stephen Glouberman, M.D., 1403-A Washington Blvd., Presidio of San Francisco, California 94129.

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Orthopaedic Surgery: Group or Associate practice. On priority list for U.S.A. Visa. Robert K. Ellis, M.D., 404 Griffin Street, London, Ontario, Canada.

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Radiology: Available January 1975. Diagnostic Radiology. License pending. Elizabeth Delia Hodby, M.D., 66 Isabella Street, Apt. 1803, Toronto, Ontario, Canada.

General Surgery: Board certified. Medium sized community in group or associate type practice. Available November 1974. Franklin L. Rutberg, M.D., Kenilworth, Apts. No. 503. Philadelphia, Pennsylvania 19144.

General Surgery: Board eligible. Available January 1975. American Boards in General Surgery to be taken in December 1974. Canadian schools. Douglas W. Denton, M.D., 662 Galloway Cres., London, Ontario, Canada.

General Surgery: Board eligible, FLEX. Two years of private practice. Available now. P. I. Mathew, M.D., 97-15 Horace Harding Expway., No. 9K, Flushing, New York 11368.

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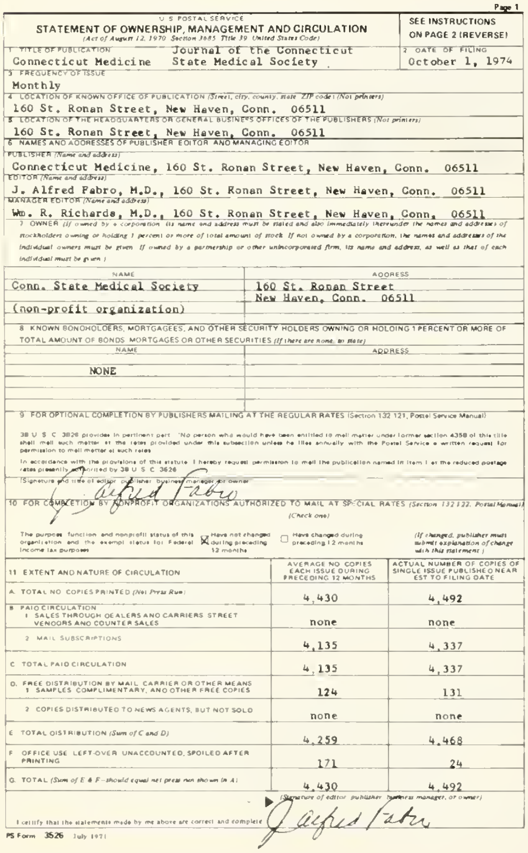

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The Septic Patient
Prevention of Disorders of Oxygen Dissociation

George M. Watkins, M.D.

ABSTRACT—Nine patients with severe sepsis were studied to determine alterations in oxygen dissociation and their causes. Seven of the patients had left shifted P50 and diminished DPG levels. Causative factors were massive infusions of stored blood, hypophosphatemia and acidosis. These deficiencies were not corrected in one case. The other eight patients survived or expired with normal to elevated P50 and DPG levels.

It was concluded that diminished DPG and P50 levels commonly are seen in septic patients. The changes have definite causes which can be rectified. Hypophosphatemia is a common occurrence in the seriously-ill patient whether or not hyperalimentation is used and may occur in spite of phosphate supplementation. CPD blood transfusions are effective in reducing the severity of this disorder by the addition of an inorganic phosphate load.

Chemical alterations in the position of the oxyhemoglobin curve were determined by Bohr in 1904. Diphosphoglyceric acid was discovered in the red cell by Greenwald in 1926. Diphosphoglyceric acid deficiency in hypophosphatemia was noted in 1939,[1] and increased oxygen affinity in stored blood (The Kennedy-Valtis Effect) was noted in 1950.[2] However, it was not until 1968 that the relationship of 2, 3 diphosphoglyceric acid and the position of the oxyhemoglobin curve was established.[3] This line of discovery led to observations that sepsis and septic shock are associated with changes in oxygen affinity and 2, 3 diphosphoglyceric acid content of red blood cells.[4] It has been commonly accepted that such changes are an integral part of the complex of biochemical alterations seen in patients with such disorders.[5 6 7] A study was undertaken to determine if the left shifted curve and the depressed DPG levels were a consistent part of the picture of sepsis and if these untoward changes could be altered.

Materials and Methods

Nine patients with high fever, tachycardia, tachypnea, leukocytosis and potentially overwhelming infections were studied. All were classified clinically as having severe sepsis by attending physicians and six of the nine had episodes of septic shock. Five of the nine cases had pathogenic organisms in their blood at some time during their course of study. Special studies carried out in these patients included position of the oxyhemoglobin curve at standard conditions (P50T), DPG levels, arterial pH, oxygen and carbon dioxide tension, plus serum inorganic phosphate and hemoglobin levels in the blood.

Results

Three patients survived. These three patients had no definite episodes of septic shock but manifested other signs of severe sepsis. Six of the nine patients died. Diagnosis of severe infection was established in five of these six who had post-mortem examinations.

Seven of the nine patients had diminished P50T and DPG levels during some portion of their septic course. In each instance, either massive transfusion of stored blood, hypophosphatemia or acidosis was present singularly and in many instances in combination. The deficits were corrected in all but one case. Table I lists the disorders found in the patients.

The depressed P50T was associated with respiratory or metabolic acidosis in three patients. Two of these three patients had evidence of septic shock. In one case, the changes in oxygen dissociation were modified and the patient survived. In the second instance, the deficits were corrected, but the patient expired. The third case, one of clostridial infection in whom acidosis could not be corrected, was the only patient in this series to die with depressed P50T and DPG levels.

Another three patients had massive transfusions of blood, causing depression of P50T and DPG. During the early part of her illness, one patient received acid citrate dextrose blood and later citrate phosphate dextrose blood in large quantities. This blood had been stored for greater than fourteen days. In all three cases, use thereafter of CPD blood stored less than seven days, and prevention of severe hypophosphatemia, was associated with a return to normal or supernormal levels of DPG and P50T.

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TABLE I

SEPTIC PATIENTS AND DERANGEMENT OF OXYHEMOGLOBIN DISSOCIATION*

Patient	*Diagnosis*	*Complication*	*Cause of Death*	*P50T*	*DPG*	*PO4*	*pH*
ACIDOSIS							
1	Incarcerated Hernia	Clostridial Infection	Gas Gangrene	↓	↓	N	↓
2	Ulcerative Colitis	Intra-abdominal abscesses	Lived	↓*	↓*	↓*	↓*
3	Post Abortion	Endometritis, Renal Failure, Empyema	Sepsis	↓*	↓*	↓*	↓*
MASSIVE TRANSFUSION OF STORED BLOOD							
2	§	§	§	↓‡	↓‡	↓‡	↓‡
4	Ulcerative Colitis	Intra-abdominal abscesses	Sepsis	↓‡	↓‡	↓‡	N ↑‡
5	Gunshot Wound	Peritonitis, Renal Failure	Sepsis	↓‡	↓‡	N‡	N ↑‡
HYPOPHOSPHATEMIA							
2	§	§	§	↓‡	↓‡	↓‡	↓‡
3	§	§	§	↓‡	↓‡	↓‡	↓‡
6	Crohn's Disease	Intestinal Fistulae Intra-abcominal abscesses	Lived	↓‡	↓‡	↓‡	N
7	Ruptured Aortic Aneurysm	Renal Failure Cardiac disease	Sepsis	N	N	↓‡	N↑
NORMAL							
8	Prostatism	Stress Ulcer Intra-abdominal abscess	Lived	N	N	N	N
9	Cerebellar Tumor	Myocardial Infarction Perforated Viscus	Peritonitis °	N	N	N	N

* The changes in P50T, DPG, PO4, and pH refer to changes occurring at some time during the study period. In all cases, the changes in P50T were present when patients were first studied. N = normal, ↑ = increased, ↓ = decreased.

‡ Corrected at death or by time of discharge.

§ See preceding section. This patient had multiple deficits.

‖ Within normal limits, but very low for patients with anemia and low cardiac output.[12] Terminal values highest ever recorded in this laboratory.

° Clinical diagnosis. No autopsy performed.

Five patients had hypophosphatemia associated with abnormalities in DPG and P50T. One patient was under treatment with hemodialysis and was receiving aluminum hydroxide gel concomitantly. Two patients were receiving intravenous hyperal imentation solutions containing little or no phosphate. The third patient had hypophosphatemia and a de-patients were receiving intravenous hyperalimentation solutions containing little or no phosphate. The third patient had hypophosphatemia and a de-pressed P50T on neither hyperalimentation, hemodialysis, nor phosphate binders. In addition, this patient at post-mortem examination, had no evidence of hyperparathyroidism.

Two patients had no abnormalities of P50T or DPG. One of these patients died and one recovered. The patient who died was followed to shortly before death. The patient who recovered was not followed beyond initial values. Both patients had sepsis. Neither massive transfusions of blood nor acidosis occurred during these patients' courses.

Discussion

The Fick Equation,

$$\text{FLOW} = \frac{\text{oxygen consumed}}{(\text{arterial oxygen content—venous oxygen content})}$$

adequately describes the interrelation between the four major components of oxygen transport. The content portion of the equation may be further expressed:

oxygen content = 1.39 x hemoglobin x PO2 x F + .0031 x PO2, where

1.39 = 4 moles oxygen/mole Hb,

.0031 = solubility of oxygen in plasma at standard conditions,

PO2 = partial pressure of oxygen,

Hb = hemoglobin concentration,

F is derived from the position of the oxyhemoglobin curve.[8]

The major determinant of oxygen carrying capacity of whole blood is oxyhemoglobin concentration. The contribution of the oxygen dissolved in plasma is small, i.e., 1.5% of the arterial content in the normal person breathing room air and 9.2% if he were breathing 100% oxygen. This is the oxygen carrying equivalent of only 0.16 gm and 1 gm of hemoglobin respectively.

Because of the sigmoidal shape of the oxyhemoglobin curve, an arterial oxygen tension rising above 80 mmHg has little further effect on the amount of oxygen bound to hemoglobin. At these partial pressures of oxygen, the position of the oxyhemoglobin curve also has little effect on arterial content. The oxygen tension of venous blood (usually 45 mm or less) falls on the "steep" or nearly vertical portion of the curve. Small changes in oxygen tension or the position of the oxyhemoglobin curve have great effect in this range. The effect increases as oxygen tension falls. (Figure 1).

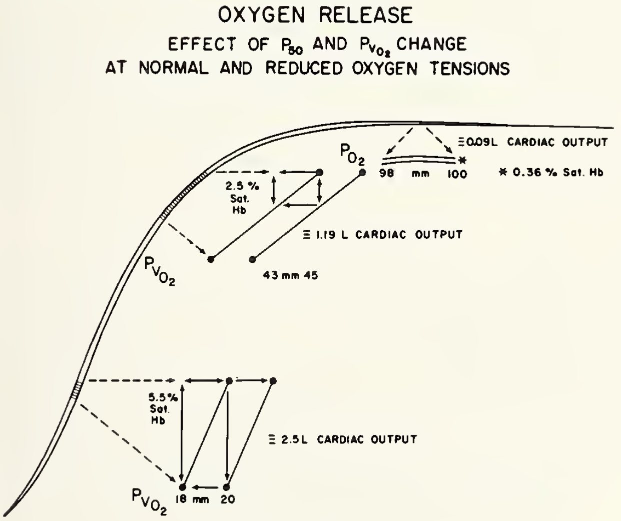

Figure 1

The effect of changes in the position of the oxyhemoglobin curve and partial pressure of oxygen on oxygen release at high, normal venous, and lower oxygen tension. The oxyhemoglobin curves shown are in normal position and 2 mm left shifted. The change in partial pressure of oxygen is 2 mm in each case. Though saturation changes are small, the resultant cardiac output equivalents (derived from the Fick equation) become increasingly significant as the venous oxygen tension falls.

Reproduced from Hyperoxia and the Red Cell—A Form of Oxygen Toxicity, Watkins, G.M., et al. Journal of Surgery Research, 1974, in press.

These acute shifts in the position of the oxyhemoglobin curve are offset at first by lowering venous oxygen tension thereby maintaining extraction constant in the tissues.[9] The same compensatory mechanism of decreased venous oxygen tension, however, is seen in a variety of conditions occurring in the critically ill patient including increased energy demands,[10] hypoxia, anemia, and hypovolemia whether or not shock is present. Local hypoxia causing vasodilatation is the accepted mechanism whereby cardiac output increases.[11] Venous oxygen tension levels and cardiac output must be considered as reserves which work together to maintain homeostasis. Once these reserves are exhausted, oxygen delivery is inefficient, and lactic acidosis appears.[10] ACD preserved blood significantly loses organic phosphates after three to four days storage. CPD preserved blood can be stored seven days before significant loss of organic phosphate occurs. An additional benefit of CPD blood beyond "effective shelf life" is the fact that it contains approximately 140 mgm of inorganic phosphate per unit of blood given, enough phosphate to raise body stores by 0.4 mg% for each unit of blood infused. When blood is stored beyond the period of time given above for each type of preservative, the resulting oxyhemoglobin curve makes the cells infused less efficient carriers of oxygen. While of little significance in a single transfusion of 500 ml in a patient with a normal red cell volume, such changes take on great significance where the infusion/red cell volume ratio is increased because of the use of large amounts of stored blood or when the original red cell mass is small.

The need for avoidance of acidosis is obvious. The incidence of hypophosphatemia in this series was unexpected and striking. Although many causes of hypophosphatemia in the critically ill have been noted, little attention has been paid to the multiple syndromes resulting from low levels of inorganic phosphate in the serum. P50T deficiencies are only one of the facets of this problem.

The exact role of shift in position of the oxyhemoglobin curve has not been totally clarified, but there is now enough evidence to conclude that the seemingly small changes seen are of clinical importance. The left-shifted oxyhemoglobin curve and diminished levels of organic phosphates are common accompaniments of sepsis. It is strongly recommended that these untoward changes of the homeostatic grid be avoided. Use of CPD preserved blood stored less than seven days for massive transfusions, the avoidance of hypophosphatemia, and correction of acidosis will totally prevent the untoward changes of diminished DPG and P50T levels which so often accompany sepsis.

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Abdominal Wound Dehiscence

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ABSTRACT—In order to determine factors influencing abdominal wound dehiscence at Hartford Hospital, records of patients with this complication over 3-1/2 year period were studied. Forty cases of dehiscence were found and reviewed. The principal finding unique to this series was that 67% of the surgical patients were operated on as emergencies. Seventy per cent of all the general surgical procedures involved the gastrointestinal tract, and 33 of the 40 operations were contaminated. Other contributing factors of importance were post-operative respiratory complications and increased intra-abdominal pressure.

Differences between general surgery and gynecology/urology were (1) age (older in surgical patients), (2) type of fascial closure (non-absorbable predominated in general surgical patients), and length of hospital stay (longer in general surgical patients). Vertical incisions were used in the majority of cases (34 out of 40).

A review of the literature concerning factors involved in wound dehiscence is included.

Among potential post-operative complications, wound dehiscence and evisceration are among the most feared. Dehiscence is defined as the separation of any sutured layer of a wound, while disruption and evisceration imply that all layers have separated. Only completely disrupted abdominal wounds are considered in this study. Most authors give rates of dehiscence from 0.5 to 5.5%, partially depending on whether muscle-splitting McBurney incisions are included. Mortality rates are declining over recent years because of antibiotics, improved respiratory therapy and intensive care units. However, recent articles still report mortality rates ranging from 11 to 38%.[1-5]

There are multiple factors that have been associated with abdominal wound disruption, and all require an understanding of normal wound healing. Neoplasms are frequently mentioned and experimental models show decreased healing secondary to tumor. Analysis in humans has not shown a consistent relationship. Rats with neoplasms gain tensile strength slower than controls, even after correction of associated anemia and hypoproteinemia.[6]

Uremia is probably not related to wound dehiscence even though urea is known to denature collagen. To do this, a blood urea level 100 times the lethal level would be required.[6]

Anemia and hypoproteinemia decrease the rate of gain of tensile strength, but do not totally prevent collagen synthesis like Vitamin C absence.[7, 8] Glucocorticoids are known to adversely affect wound healing by binding with receptor proteins to produce protein and RNA.[9] Other catabolic steroids that stabilize lysosomal membranes, such as Vitamin E, have a similar effect.[10, 11] Factors that labilize lysosomal membranes, such as Vitamin A and testosterone, antagonize the steroid effect on wound healing, but do not promote increased healing in normal experimental animals.[12, 13]

Local factors causing increased wound dehiscence include infection, hematoma, and an end colostomy

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through the wound.[3] [14] Bringing a drain through a wound does not increase dehiscences, but may encourage the formation of a ventral hernia.[6]

Clinical Material

A study of wound disruption at Hartford Hospital utilized clinical material from two sources. Charts of all patients discharged with a diagnosis of wound separation or dehiscence between January, 1969 and June, 1973 (3½ years) were reviewed. This source yielded 32 patients on the general surgical, gynecology and urology services. An additional eight patients were found by reviewing the weekly complication conference reports in the Department of General Surgery over the same time period. A total of 40 patients were available for study, but only the initial 32 were used in any comparative analyses.

Results

There were 22 males and 18 females in the study. On the general surgery service 20 out of 23 patients were males. There were 4 Negroes in the entire group. The age of patients at the time of dehiscence varied greatly according to service (Figure 1). The average age of surgical patients was 60.7 years; 83.9% of these were older than 50. The gynecologic-urologic group were younger, with an average of 47.5 years and only 41.2% older than 50.

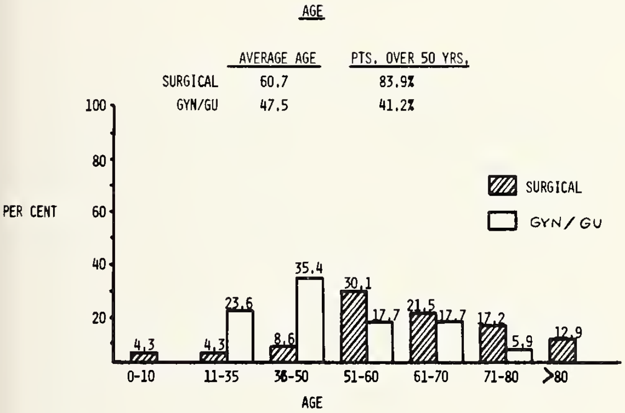

Figure 1

Determining the actual rate of wound dehiscence during the study period is not readily done. There is no listing of the amount of abdominal surgery performed, so this information was extrapolated from operating room log books during a random one month period. The number of abdominal procedures during this month (326) was multiplied by the number of months in the series (42) and divided into the number of dehiscences (40). The estimated dehiscence rate thus derived is 0.3%. This figure is at the low end of the spectrum partially because of the inclusion of appendectomies.

Another way to look at the dehiscence rate is to compare the amount of surgery done on each service to the proportion of dehiscences on each service. It can be seen in Figure 2 that the distribution of dehiscence according to service is almost identical to the volume of surgery done.

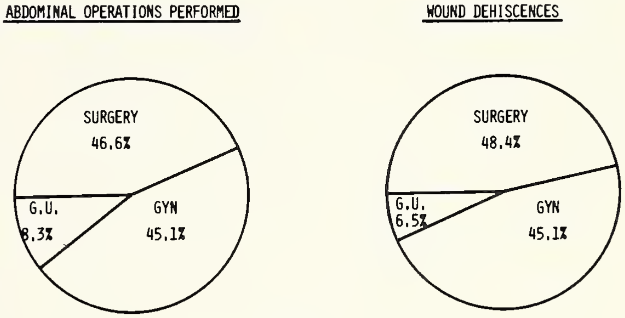

Figure 2

The type of operation done involved the gastrointestinal tract or uterus most frequently (Table 1). It should be noted that no instance of dehiscence was found following biliary tract surgery during the study period. One procedure was for hiatus hernia.

TABLE 1

TYPE OF OPERATION (40 PATIENTS)

Hysterectomy	9
Gastro-Duodenal	8
Colon-Intestines	8
Exploratory Lap.	4
Caesarian Section	4
Cystectomy	2
Other Surgical	3
Other Gyn	1
Other G.U.	1
Biliary	0
Perforated Bowel	5
Cancer	5
Thoraco-Abd.Wd.	2
Hiatus Hernia	1

Out of the 23 general surgical operations in the study, 15 cases were emergency (65.2%), 5 were performed for cancer (21.8%), and only 3 cases (13%) were entirely elective. The risk factor for dehiscence is greatly increased if emergency surgery is performed. Contributing factors for dehiscence were noted in 2 of the 3 elective cases.

A list of other contributing factors in the entire series of patients is shown in Table 2. The most common factors were contaminated wounds and respiratory complications. Infrequent factors were anemia and steroids. Wound infection was also lower than expected.

TABLE 2

CONTRIBUTING FACTORS

	Surgical (23 Pts)	*GYN/GU* (17 Pts)
Anemia	5	2
Steroids	3	1
Abdominal Distention	4	4
Respiratory Complications	20	5
Cancer	5	2
Contaminated Wound	16	17
Wound Infection	6	2
Deaths	3 (13%)	0

Others:

Colostomy in Incision-1
Heparin RX-1
Starvation-1

Table 3 indicates the direction of incision and type of suture material used in fascial closure. Vertical incisions predominated, while non-absorbable suture material was the most frequent in general surgical patients.

TABLE 3

DIRECTION OF INCISION AND TYPE OF SUTURE MATERIAL

	Incision		*Fascial Suture*	
	Vertical	*Transverse*	*Absorbable*	*Non-Absorbable*
Surgical	19	4	1	21
GYN GU	15	2	6	8

The time of wound dehiscence in relation to surgery is indicative of possible reasons for dehiscence. Wound separation in the first 3 days is due to technical factors, and dehiscence after 10 days is due to patient factors (Figure 3). The two late dehiscences in this series had associated factors. The first patient dehisced 28 days after surgery while on steroid therapy. The second patient had anemia, abdominal distention, and respiratory complications.

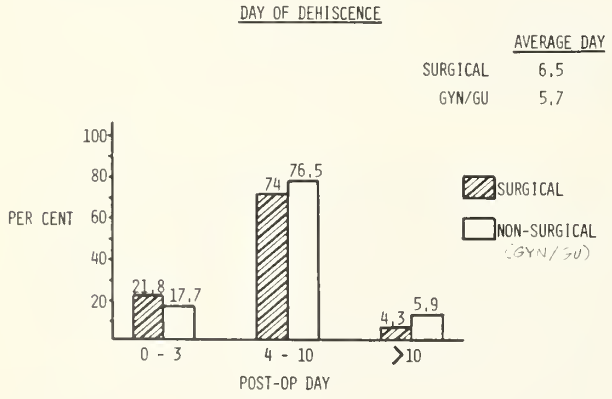

Figure 3

The mortality rate in this series was 7.5% (3 patients). One death occurred following elective surgery, while the other 2 deaths were in severely ill poor-risk patients requiring emergency laparotomy.

Discussion

In a retrospective series of patients such as this, no one factor can be isolated that increases the rate of abdominal wound dehiscence. The predominance of males corresponds to other series, perhaps due to stronger abdominal muscles causing greater wound tension.

The factor of emergency surgery is obvious from this study[3] and is related to the status of these patients at the time of surgery. They are frequently critically ill, with sepsis or blood loss contributing to their illnesses. Often there is little time for preoperative correction of underlying disorders.

Respiratory complications are common prior to evisceration. This is related to increases of intra-abdominal pressure generated by coughing. Several patients dehisced during endotracheal suctioning and one during a paroxysm of cough. Other instances of elevated abdominal pressure were seen with dehiscence while straining for a bowel movement, post-operative hiccups, and distended obstructed bowel. Most authors agree that increased abdominal pressure contributes to wound disruption with one recent exception. Keill et al[16] found no relation of pressure and dehiscence when comparing a group of patients with dehiscence to random controls.

It is noted from Table 1 that one procedure in this series was for hiatus hernia repair. Bitterman et al[15] found a 13% dehiscence rate following hiatus hernia repair compared to a rate of 0.9% for other upper abdominal surgery. It was suggested that returning the stomach to an intra-abdominal position caused an increase of intra-abdominal pressure.

The overwhelming majority of patients in this study had vertical incisions. Transverse incisions of the abdominal wall have multiple theoretical and experimental advantages. The amount of tension generated across a vertical upper abdominal incision is about 30 times greater than across transverse wounds. This is related to the number of aponeurotic bands in the rectus muscle that are divided. Fewer nerves are divided in transverse abdominal wounds, but more blood vessels. Transverse incisions are most cosmetic because they follow Langer's lines of tension.

A technique of wound closure popularized by Jones (far-near-near-far) was used infrequently in this study and could not be evaluated. However, it has been well studied in the past and should be used with closures in high-risk for dehiscence patients. In a study using rabbits as an experimental model and an 11 year review of dehiscences, Higgins et al[7] compared Tom Jones and layered closures. In 51 cases of wound dehiscence, the layered closure had a 3.7% rate of wound separation compared to a 0.7%

rate when a Tom Jones closure was used. Studying tensile strength in transverse and vertical incisions, they showed that the Tom Jones closure had greater tensile strength in vertical wounds, but was not advantageous in transverse wounds.

The mortality rate of 7.5% in this series compares well to other groups of patients. Only one of the three deaths could be considered preventable. The morbidity following wound dehiscence is reflected in the hospital stay after initial surgery: 25.7 days over-all, and 33 days in the general surgical patients.

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Burn Management in a Community Hospital

Michael L. D'Aiuto, M.D.

Introduction

In March 1970 the Burn Service of the Surgical Department of Bridgeport Hospital officially came into existence, the nucleus of this Service consisting of 4 general surgeons and a plastic surgeon, several of whom had had burn management experience in the military. To this was added a complement of 8 highly motivated nurses oriented to burn-nursing by in-service lectures. As time went on the ancillary aid of such departments as Ophthalmology, Orthopedics, Psychiatry and Physiatry was sought to assist in the many multidisciplinary problems that arose.

The reasons for the establishment of the Service were threefold: (1) the recognition that a significant number of serious burns were regularly hospitalized, many of which represent complex problems in management; (2) the realization that optimal care delivery demanded the Team Approach to give the kind of care that is rarely, if at all, achieveable in a one-on-one setting; and (3) the acknowledgement that such a Service might not only be desirable but necessary in a Community Hospital, since the vast majority of the over 80,000 serious burns that occur per year are treated in this type facility.

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Actual data collection was not begun until November 1970; this has included only in-hospital burns. While the quality and completeness of these data has not been exhaustive, nonetheless, we have arrived at several observations we feel to be warranted.

Data

From November 1970 to April 1973, 88 patients were admitted and treated for burns. The age range was from 1 to 94 years. The age groups (Figure 1) showed two interesting peaks: in the 1 to 10 years, and in the 21 to 40 years categories. In other words, 32% of the total cases involved patients 10 years or less, and 39% of the total cases involved patients 21 to 40 years.

BURNS — AGE DISTRIBUTION

Age Years	1-10	11-20	21-40	41-50	>50
Number Cases	28	13	35	5	7
Percent Total	32	14	39	6	8

Figure 1

The cause of the burns was thermal in 84 cases; there were 3 cases of electrical burns, both involving children under 10 years, and 1 case of a sulfuric acid burn deliberately caused. One of the thermal burns was non-accidental, the patient having attempted self-immolation.

The extent of burns varied from 3% to 85% of body surface area, with the depth ranging from first to third degree (Figures 2 and 3).

PERCENT BSA — RANGE

Percent BSA	0-10	11-20	21-30	31-40	41-50	50-85
Number Cases	35	36	7	5	3	2
Percent Total	39	41	8	6	4	1

Figure 2

DEPTH OF BURNS

Degree	1°	2°	3°	1° & 2°	2° & 3°	1°, 2° & 3°
Number Cases	5	17	9	38	13	6
Percent Total	6	19	11	42	14	7

Figure 3

Pulmonary complications as a manifestation of smoke inhalation or other direct thermal effect were positively identified in 7 cases. These were all moderately troublesome clinically, but all responded well to treatment, and none was fatal. Four patients required tracheostomies.

The modes of treatment also showed considerable variation, chiefly involving the management of second and third degree burns. A cross-sectional analysis of these modes is summarized in Figure 4 and will be commented on in the discussion.

There were only 3 deaths, 2 of which were due to prior existing cardiovascular problems, and the third of which was due to gram-negative sepsis, death occurring on the 16th post-burn day.

Systemic antibiotics were used rather sparingly, Ampicillin being the most commonly used as prophylaxis in the first two weeks (12 cases). The commonest contaminating organism, as expected, was Pseudomonas aerugenosa, although Staphlococcus aureus coagulase positive was reported in 10 instances. In all the cases of Staph contamination, control was obtained with the judicious use of topical treatment.

In 18 cases, extremely vigorous resuscitation was needed in the form of massive fluid loading to correct failing circulation and impending renal failure. This was done without incident and without any measurable degree of overload or miscalculation of fluids.

Resuscitation was accomplished for the most part using isotonic physiologic solutions, usually Lactate Ringers or Saline. The fluid formula most commonly used was the Brooke formula. The usual parameters of CVP, urinary output, blood and urine osmolality, serum electrolytes and blood gases were routinely employed.

Discussion

Eighty-six of the 88 cases reviewed are termed accidental, or at least non-intentional; however, even if one is willing to accept as unavoidable the 47 burns recorded in the "responsible age range" of 21 to over 50 years, in this series there remain 41 victims of "accidents" age 20 years or less. The commonest cause of all burns was hot water or hot beverage being spilled by either the patient or a so-called responsible adult.

Explosions, housefires, etc., were extremely uncommon, although in 8 cases burning clothing was associated with serious burns in children, and at least one case of a house fire and serious body burns was directly attributed to cigarette smoking. While somewhat speculative, one cannot help but feel strongly that more reasonable care in keeping children away from stoves, and the use of fire retardant clothing could have prevented or ameliorated many of the tragedies that resulted.

As noted in Figure 4 there was a very wide range of treatment modalities, with sulfamylon and silver nitrate being the mainstays of topical treatment of partial and full thickness burns, although Bacitracin, Neomycin, Betadine, etc., have their proponents,

TREATMENT MODES

	*Local—Chemotherapy**						*Local—Others**		
Agent	SM	AG	BAC †	NEO †	FUR †	BETA †	SG	PSD	PLA
Number Cases	30	22	7	11	8	16	17	8	1

Figure 4

SM = Sulfamylon, AG = 0.5% AgNO, BAC = Bacitracin, NEO = Neomycin, FUR = Furacin, BETA = Betadine.
SG = Skin Autograft, PSD = Porcine Skin Dressing, PLA = Placental Dressing.

* = Multiple Modes often used in same case.

† = Most commonly used for 1° and 2° Burns.

generally for lighter burns. There is often lively discussion among the members of the Service that echoes the position taken in the literature regarding "Sulfamylon vs. Silver Nitrate," but we feel this is to be a healthy atmosphere that promotes and preserves an individualized approach rather than a set routine that offers no compliance. The common wish, however, is for the availability of silver sulfadiazine, which has been so favorably reported in the literature; we hope to have it soon.

Additionally, porcine and placental biological dressings have been used. While our experience with placental material is limited, at the time of this writing an increasing experience with porcine material has been accumulated, with favorable results. We feel this will become a more commonplace mode of dressing burns as our experience broadens.

Finally, as was alluded to earlier, we have come to realize what further data need to be recorded in order to be able both to report as well as to analyze critically our burn experience. For example, we have not tabulated the success rate of autografts; this should be compared with Burn Biopsy counts which we also plan to do.

The Service has recently been blessed with physical allocation of space in the hospital to contain an eight bed patient area as well as a room in which to house a full body immersion tank and other equipment. While this area is definable as a "Burn Unit," we feel strongly that it is really nothing more than the logical outcome of what had to begin as, not a Burn Unit, but a Burn Service. The distinction may be subtle, but is nonetheless pertinent.

The optimism of our reported experience modestly assures us that we are beginning to perform with a degree of expertise that can only occur in an active, viable Burn Service; and that, in the last analysis, should be the justification for the very existence of this Service.

ADDENDUM:

Since the writing of this article Silversulfadiazine has become available and is now being used in the Burn Unit.

Current Management of Primary Hyperaldosteronism

Henry Mannix, Jr., M.D.

Historical

In the early 1950's, it became apparent that there was a mineralocorticoid produced by the adrenal cortex which was extremely potent as a salt retainer, and, in addition, appeared to have some effect on raising the blood pressure in humans. In 1952, Grundy, Simpson and Tait[1] characterized this substance as aldosterone and over the next several years it was demonstrated that this was an extremely potent salt retaining steroid.

In 1955, Jerome Conn[2] reported the first patient with primary hyperaldosteronism. This patient had moderate hypertension, weakness, and was demonstrated on evaluation to have significant hypokalemia. Additional study revealed an increased excretion of aldosterone in the urine. The patient was subsequently operated on and a small benign tumor found. The patient had good relief of the hypertension and the electrolyte imbalance.

In the next several years, patients with three types of pathology were treated. Far and away the most common cause of this condition was small adrenal adenomas which in 10 to 15 percent of patients would be bilateral. Approximately 10 to 15 percent of patients would have adrenal cortical hyperplasia and there was a very small percentage of patients with adrenal carcinoma. In the early 1960's[3] the determination of the plasma renin activity became available and it was at that time possible to clearly differentiate between increased aldosterone activity as a result of renal artery disease from that of adrenal tumor. In the early period after this syndrome was described, patients who had bilateral adrenal hyperplasia were chacterized as having congenital hyperaldosteronism. In the middle 1960's, Conn[4] described another instance where the patients had normokalemic primary hyperaldosteronism, and it began to become apparent that the patients with hyperplasia who were operated upon did less well than those who had adrenal adenoma as the cause for the syndrome. In even later years, there has been additional interest in the area of the angiotension renin aldosterone system because the individuals with low plasma renin activity have been identified as having hypertension that appears to have a less serious prognosis than those who have hypertension where the serum-renin activity is normal or high.[5] [6] [7] [8] In some series, approximately 25 percent of patients with essential hypertension may have decreased plasma renin activity. In this group of patients who have been studied, only a very small percent will have increased aldosterone secretion, and of this group, 75 to 80 percent will become normotensive on spironolactone therapy. Several of these patients have been subjected to surgery and the findings have been a moderate degree of adrenal hyperplasia or no gross adrenal abnormality.

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Symptomatology

The classic triad of moderate hypertension, weakness and varying degrees of hypokalemia is not seen in all patients. There are patients who will have adenomatous primary hyperaldosteronism who will have a normal serum potassium. As mentioned in the historical background, additional chemical procedures have made it, in many ways, more difficult to clearly establish the diagnosis in these patients. Biglieri[9] has identified four types of primary hyperaldosteronism; 1) aldosterone producing adenoma (APA), 2) idiopathic hyperaldosteronism (IHA), 3) indeterminate hyperaldosteronism (IND HA), and, 4) gluco-corticoid remediable hyperaldosteronism (GRHA). Of these four groups, only the first is clearly benefited by surgery. The major problem is in defining the patients who have had adenomas from those who have so called idiopathic hyperaldosteronism or aldosteronism caused by hyperplasia.

The degree of hypertension in these patients is generally moderate although if they have associated renal disease the hypertension may be more severe. The hypertension tends to be persistent rather than episodic, and many of these patients have been hypertensive for several years or more. The weakness is clearly related to the degree of hypokalemia and can be rapidly corrected by treating the hypokalemia either with oral or parenteral supplementation. These individuals have no particular physical characteristics such as are seen in patients with Cushing's syndrome and the hypertension is rarely as spectacular as may be seen in patients with pheochromocytomas.

Laboratory Work-up

A) *Chemical Determinations:* The differentiation between hyperaldosteronism produced by adenoma or carcinoma, and primary hyperaldosteronism produced by hyperplasia is clearly of considerable importance. As can be inferred from the initial part of this presentation, the diagnosis has become more sophisticated as additional laboratory determinations become available and apparently it can be difficult to differentiate between the tumorous type of aldosteronism from that of the hyperplastic variety. Biglieri[9] feels that a distinction between these two types can be made by plotting the basal recumbent plasma-renin concentration against the rate of aldosterone production after administration of desoxycorticosterone acetate. This test has been accurate in thirteen patients. Aitchison,[10] doing both a prospective and retrospective study, used quadric analysis. Five series of patients were reviewed, two of which were the author's own, and three of which were studies of other publications. Aitchison's group determined eight different parameters for evaluation, but noted that the parameters had to be individualized for different reports. They were able to determine that patients with adenomatous hyperaldosteronism had significantly greater abnormalities than did normals or patients with hyperplasia causing hyperaldosteronism. The accuracy rate was extremely high.

The determination of the potassium sodium ratio in the saliva has been reported to be of considerable help by the Columbia group.[11] Patients with various abnormalities in the renin-angiotension aldosterone cycle were studied and they found that patients with adenomas producing hyperaldosteronism always had significantly increased concentration of potassium in the submaxillary gland saliva in relation to the sodium in the saliva. This increased concentration was not found in patients who had hyperplasia or were normal, and this difference was not found in the saliva from the parotid gland. In a series of thirteen patients and eight normals, they found no overlap. I am not certain whether this has been substantiated by other investigators.

B) *Angiography and Venous Sampling Studies:* Additional laboratory work includes angiography and adrenal vein samplings. Conn[12] and Melby[13] have been most successful in using these techniques and have found this to be extremely helpful in identifying the site of the tumor, whether it is an adenoma or bilateral hyperplasia. It appears that patients with a tumor will have a much higher adrenal vein concentration of aldosterone on the ipsilateral side. Conn and Melby have reported a high percentage of success in catheterizing the right adrenal, however, not all investigators have experienced such good results using this technique. In addition there have been reports of adrenal vein thrombosis following the angiographic studies and in several instances they have been on the normal side.

In 1972, Conn[14] first reported his experience with scintillation scanning, using 19 iodo-cholesterol labelled with radio-active iodine. Initially, he reported four patients in whom the tumor had been visualized by venography and who were re-studied with the scanning technique. The scintillation scanning was positive on the side where the tumor had been previously identified. A fifth patient in this study had diffuse hyperplasia and was found to have equal concentrations of the 19 iodo-cholesterol on both sides.

Preoperative Preparations: Since the body habitus of these individuals are not unusual, they do not present many of the technical problems of those patients with Cushing's syndrome. In addition, their hypertension is generally moderate and frequently can be controlled with spironolactone in the preoperative period. It is essential that the patient's total potassium be replaced prior to surgery, and in most individuals it would take four to five days preoperatively to accomplish this. There are no other particular preoperative studies other than a careful evaluation of any patient who is to undergo major surgery. Needless to say, intravenous pyelography would have been obtained preoperatively. As these patients are not particularly subject to cardiac irregularities as are the patients with argentaffin tumors, the anesthetic can be one with which the anesthesiologist is most familiar and most comfortable. The patient probably should be monitored with continuous electrocardiograms during surgery.

Operative Approach: The most popular operative approach is the posterior approach initially proposed by Nesbit.[15] This is certainly a very useful technique where the site of the tumor is well delineated. The benign tumors tend to be very small and are frequently difficult to palpate in-situ. Nesbit popularized the concept of dicing the adrenal gland without destroying the blood supply so as to identify the tumor without doing a total adrenalectomy. This technique, however, is not infallible. The flank approach can also be used if the site of the tumor is known. The posterior approach can be somewhat difficult in patients who are significantly obese and some authors[16] have favored the trans-abdominal approach so that glands can be exposed more or less simultaneously. The author has more experience with this approach rather than the posterior approach. It does enable us to simultaneously evaluate the glands but, again, since the tumor is small, it is not always possible to be absolutely certain where the tumor is. The abdominal approach has the additional drawback in that the patients will most certainly develop some degree of ileus in the postoperative period and the procedure may be somewhat longer.

Pathology: Most reported series estimate approximately 85 percent of patients will harbor benign tumors;[17] that 10 to 15 percent of patients will harbor bilateral hyperplasia; and a small percentage of patients will have carcinoma. There were 11 cases of carcinoma reported in a collective review[18] up to 1969. A review of the literature to 1973 revealed two additional case reports,[19 20] but no complete review of the incidence of carcinoma. In the reported patients with carcinoma, the tumors were invariably large, usually weighing at least several hundred grams. They were accessible only through an thoracoabdominal approach.

Follow-Up: 80 to 90 percent of patients with adenomatous disease will have significant benefit from surgery with total or at least significant amelioration of their hypertension and correction of the electrolyte abnormalities. In patients with idiopathic or hyperplastic hyperaldosteronism, the results are much less satisfactory.[21] Only Conn[12] feels that the results are comparable when subtotal adrenalectomy is done. Biglieri[9] feels that there is no clear-cut answer but advises subtotal adrenalectomy because it may be somewhat easier to control the patient's hypertension.

In a small personal series, the author has found hypertension was not significantly helped in any of the patients whether a unilateral or subtotal adrenalectomy was performed. All of the patients with carcinoma have done poorly if the follow-up was long enough. These patients are generally seen when the tumor is extremely large or has already metastasized to local or distant sites.

Summary

This review has attempted to formalize the present problem in primary hyperaldosteronism. When the diagnosis can definitely be established, including that an adenoma is present, surgery is clearly beneficial. If there is a question of the diagnosis, probably a trial of spironolactone should be considered before advising surgery since it appears that the results of surgery in patients with hyperplasia of the adrenals leaves much to be desired.

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Childhood Obesity

R.P. Schwartz, M.D. and J.B. Sidbury, Jr., M.D.

A treatment plan is presented for managing obese children. The program consists of an initial fast until ketosis develops followed by a low calorie, low carbohydrate diet. The low carbohydrate content of the diet decreases the stimulus for insulin release causing a rapid lowering of elevated insulin levels. This allows fatty acid mobilization to occur with oxidation in the liver and resultant ketonemia and ketonuria. The patient is able to get feedback by testing the urines for ketones daily. Weight and abdominal circumference are followed closely. The central role in the program is played by skilled and dedicated dieticians. An exchange system is used for dietary instructions along with behavior modification techniques. An exercise program is also a vital component of this regimen. Short-term results are encouraging but long-term follow-up will be essential to determine the eventual outcome of these children.

Introduction

Obesity in childhood has become a significant health problem in this country. This is dramatized even more when one realizes that 80% of overweight children become overweight adults.[1] The literature contains many articles on obesity stressing the prevalence and gravity of the problem. However, most authors have adopted a defeatist attitude in managing obese children. Many have cited the low rate of success and others have questioned the safety of caloric restriction in growing children.[2] We, also, had been negative in our attitude toward obese children, and it is obvious that our feelings of frustration were conveyed to our patients and their families. It may be, however, that we and others have been setting our goals too high. Certainly the "cure rate" in many diseases does not approach 100%. The failure of some patients to lose weight, however, should not influence us in offering a program for weight reduction and nutritional education to others who might succeed. Although our program offers no panacea to this problem, we do feel that a more positive approach is warranted.

Basic Concepts in Understanding Obesity: Role of Cell Size and Cell Number

According to a currently accepted hypothesis there are two predominant forms of obesity: hyperplastic type associated with increased cell number and the hypertrophic type associated with increased cell size. In childhood obesity the primary problem is hypercellularity, as opposed to late onset adult type obesity where the hypertrophic type predominates.[3] Critical periods for increasing fat cell number have been shown to exist in experimental animals. The first year of life in the human infant is thought to represent such a critical period.[4] The interval from two to eight years is another time when children may have rapid increases in fat cell number. This is clinically significant in that weight loss is thought to be associated with a reduction in fat cell size but no decrease in adipose cell number.[3] Others, however, have questioned the accuracy and validity of these measurements.[5] Also, it is known that fat

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cell size and number differ in different parts of the body. Since cell atrophy can occur in other areas (such as the brain) it is reasonable to assume that this would be possible in fat depots.

Etiology of Obesity

The cause of childhood obesity is unknown. The question is often raised as to whether there could be a possible endocrinologic role in the etiology of obesity. This prospect can often be eliminated by a physical exam and careful growth measurements. The two main endocrine causes of obesity are hypothyroidism and Cushing's disease. Both of these conditions are associated with small stature as well as obesity. Markedly overweight children, on the other hand, are advanced in growth and skeletal maturation.

Although obesity does occur more frequently in certain families, the roles of genetic and environmental influences are difficult to separate. Regardless, however, of how many family members are obese, it resolves in most cases to an imbalance in the equation between intake and output; that is, excessive calories, decreased activity, or a combination of both for a particular individual. Both calories and activity must be considered, for what is a normal caloric intake for an active person may be excessive for an inactive one. This is true even in the first year of life and is an area where we as physicians can exert a positive force. Certainly we should do all we can to dispose of the prevalent concept that a fat baby is a healthy baby.

Low Calorie, Low Carbohydrate Diet in Weight Reduction

Recognizing then that obesity is a serious and common childhood problem, we began to ask ourselves what could be done. It has been noted that obese subjects have excessive insulin levels.[6] This is associated with a state of insulin resistance which in turn is the result of decreased insulin binding to fat cells.[7] Insulin has been shown to have as one of its major actions a vital role in lipogenesis.[8] Since glucose is the main stimulus for insulin synthesis and release, it was reasoned that a low carbohydrate diet would decrease the stimulation of the beta cells and permit normal fatty acid mobilization.* The fatty acids are oxidized in the liver and ketones are a by-product of this oxidation. By testing the urine for ketones, then, the patient has evidence that he is mobilizing fatty acids from his fat cells. We stress this fact and have the patient test the urine daily for ketones. This is important since there are fluctuations in weight due to changes in fluid retention. Many patients become discouraged at this temporary leveling off of weight. We have found, however, that the positive urine ketone test along with decreases in abdominal girth, which occur in spite of a plateau in weight loss, gives reassurance to the patient.

Our program then is as follows: we first obtain a good history paying particular attention to the age of onset of obesity, precipitating factors, and physical activity patterns. A vital part of the history is a dietary record. Patients are sent a form to record food intake for several typical days noting the time food is consumed, where food is eaten, and the amount of food taken. One of the most difficult problems to which we have not found the answer is how to assess motivation. This is a crucial factor for the patient to succeed in this or any other program. Some of our patients are tried on the program as outpatients and others are admitted to the hospital. Although we have kept a number of children on our research ward for as long as a month during our obesity study, we have found that a five day hospitalization is adequate for initiating the diet. A careful physical examination is performed with measurements of blood pressure, height, weight, chest circumference (sitting), and abdominal circumference (supine). Bone age films are obtained and usually a baseline chest X-ray. Hip films are taken if the patient has an abnormality in gait. We have found cases of Legg-Perthes disease, slipped capital femoral epiphysis and Blount's Disease in our series. The patient is initially placed on a regular diet and a three hour glucose tolerance test done with measurement of glucose and insulin levels. Following this the patient is started on a fast with only water and non-caloric beverages (Tab, Fresca, Diet Shasta, Diet Dr. Pepper, Freshy, Canada Dry Diet Cola, Diet Gingerale, Diet Pepsi, unsweetened Kool Aid) allowed until the urine ketones become positive. This generally takes one to two days and we have not fasted anyone longer than 48 hours. When Ketonuria develops, we start the diet—300 calories for children three to eight years, 500 calories from eight years to puberty, and 700 calories after puberty. The composition of the diet is 18% carbohydrate, 41% fat, and 41% protein. The protein content is at least one gram per kilogram of ideal body weight. Dietary education by well trained and dedicated dieticians plays a central role in our program. Patients are taught the essentials of good nutrition and are given the responsibility for planning their own menus using an exchange list similar to that used by diabetics. This is a system easy to teach and one familiar to all dieticians. They are also started on an active exercise program which can be continued at home. We have also supplemented our dietary program with some behavior modification techniques to alter eating and activity patterns. As part of our educational program we have used a short manual describing behavior modification techniques used in the control of obesity.[9] Attention is focused on those activities which contribute to increased intake or decreased physical activity. The patient is encouraged to work on the following steps.

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*It should be noted that the use of a low carbohydrate, low calorie diet is not a new concept. It has been used for many years in the treatment of obesity in adults. We are not aware, however, of its use as an aid in weight reduction in obese children.

1. Eat only in one room of the house and avoid other activities while eating.
2. Note stimuli which precede eating (watching television) and try to avoid them.
3. Cut food into smaller pieces to make small portions look large. Learn to eat slowly and pause between bites. Do not put more food on the fork until the food in the mouth is chewed and swallowed. Make second helpings hard to get.
4. Take steps to avoid boredom, loneliness, anger, depression, and fatigue which can lead to hunger and eating activities.
5. Keep "forbidden foods" out of the house. This is especially important as it has been found that while an obese person will eat foods that are readily available (potato chips, crackers kept in the pantry), he will usually not go out of his way to obtain something to eat (such as walk down the street to the candy store).
6. Always keep safe foods available to use as snacks. Our patients have noted that foods that require chewing such as celery, carrots or popsicles made out of non-caloric beverages are often more satisfying than liquids.
7. Keep a record of weights and place it in a convenient location (such as on the refrigerator door).
8. Engage in a daily exercise program.
9. Build a payoff into the program (such as a new dress for a certain weight loss, etc.).[9]

Our patients have noted that when they become ketotic their appetite is decreased. This is an added benefit and is directly linked to the maintenance of ketosis. If the ketosis is broken by consuming carbohydrates, then hunger returns. We instruct them to fast for a short period (usually it is only necessary to miss one or two meals) if the early morning urine becomes negative for ketones and then go back on the diet.

Various parameters are followed while on the diet in addition to weight, height and abdominal circumference. Blood studies are obtained including glucose, ketones, insulin, lipids, amino acids, uric acid, SGOT, and SGPT. The insulin and amino acids are research tools and are not essential. This also applies to blood ketones since the urine ketones may be observed. The blood glucose often drops slightly but we have not observed any clinical hypoglycemic symptoms. The blood cholesterol is variable initially but declines on the diet. Concern was initially raised about acid base balance but no acidosis has been detected and results show a compensated ketosis. The uric acid usually rises due to decreased uric acid excretion in the urine. This is due to a competitive effect of the ketones on uric acid excretion. The uric acid values gradually decrease and we have noted no ill effects, specifically no evidence of renal or joint symptoms. SGOT and SGPT also sometimes rise initially. This may be related to fatty acid accumulation in the liver and is a transient response with no clinical untoward effects.

Conclusions

The most frequent criticism of a low caloric regimen in children is that it will interfere with normal growth patterns. This has not been our observation as we have observed normal growth on the diet in our patients. Our general practice is to keep the patient on a strict diet for about four months and then raise the caloric intake in graduated steps. We then institute the diet again in six months if further weight loss is desired. Also noteworthy is the fact that markedly obese children are already advanced in their growth and skeletal maturation, and the argument that caloric restriction for limited periods of time might interfere with their growth is in fact a rationalization for nihilism. It is even possible that the ketosis induced by the diet might have a protein sparing effect. In a study on one of our patients using daily measurements of urine urea nitrogen excretion we were unable to detect an increase in nitrogen loss while on the diet over a one month period. Since the diet is deficient in certain vitamins and iron, a multi-vitamin preparation with iron is prescribed. In smaller children Vi-Penta® is used because it does not have a sugar base.

Another consistent observation is that of the effect of the regimen on school performance; to wit, improvement has been our experience. This might be due to increased motivation secondary to improved body image.

The most important question to be answered relates to long-term results; that is how many children are able to maintain their weight in a normal range after weight loss. At present we interpret success on the basis of the result after one year, but the final answer must depend on five or more years of elevation.

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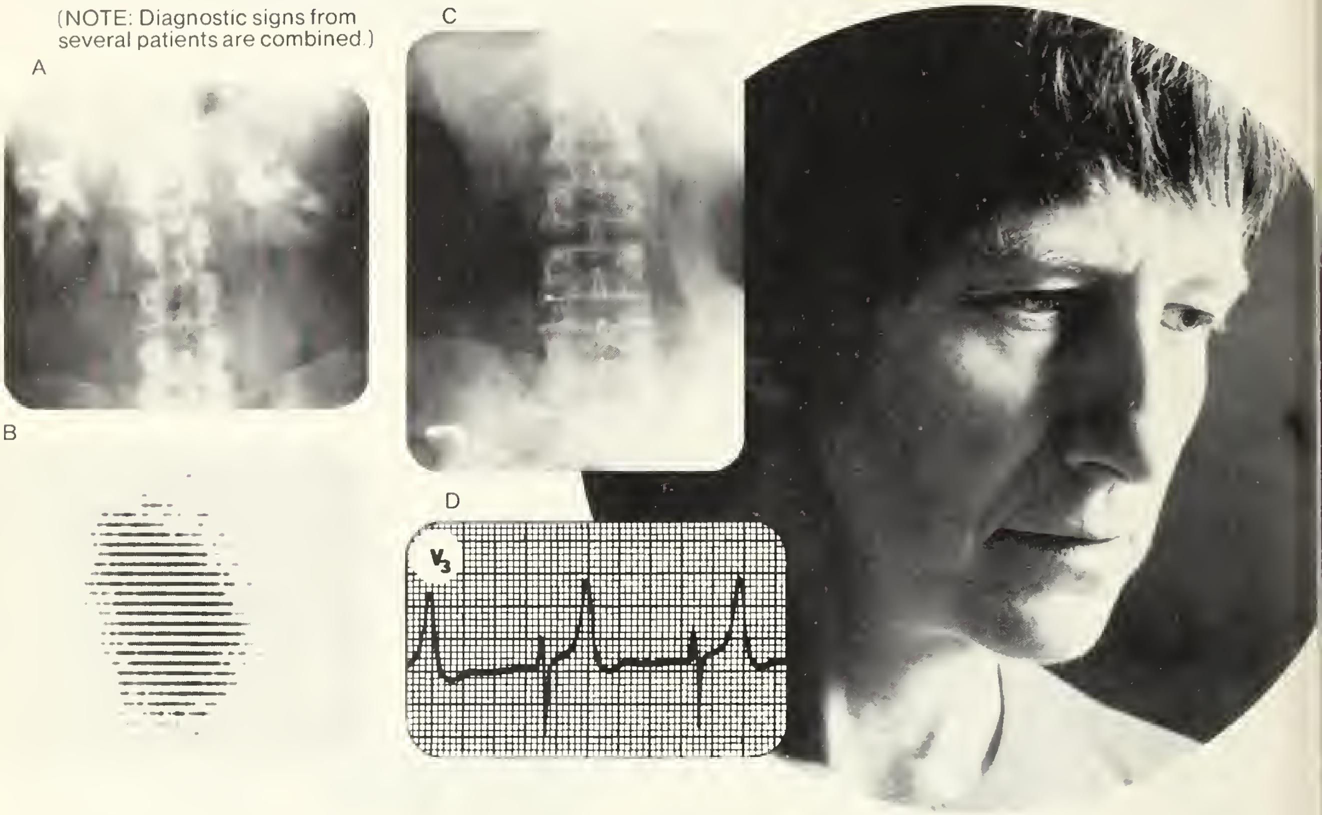

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BOOKS RECEIVED

The receipt of the following books is acknowledged, and this listing must be regarded as sufficient return for the courtesy of the sender. Books that appear to be of particular interest will be reviewed as space permits.

Current Pediatric Diagnosis and Treatment by C. Henry Kempe, M.D., Henry K. Silver, M.D. and Donough O'Brien, M.D. and Associate Authors. Lange Medical Publications, Los Altos, California. 3rd Edition. 1020 pp. 1974. $12.00.

Rituals Of Surgery by Richard Selzer. Harper's Magazine Press. Published in Association with Harper & Row, New York. 1974. 193 pp. $6.95.

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Reflections from the Dean's Office

Robert U. Massey, M.D.

The University of Connecticut Health Center has recently gone through another of what seems to have been an interminable series of investigations. This time it was the Legislative Review Committee, probing everything from administrative efficiency which is its duty, to curriculum which is not its concern.

State Universities are accountable to the people and their representatives. But unless there is an understanding of the University's special place in our culture, continuous probing could prove fatal.

In 1840, the Michigan House of Representatives appointed a committee to look into University matters. Their awareness of the dangerous nature of their task was well stated:[1]

> "When legislatures have legislated directly for colleges, their measures have been as fluctuating as the changing material of which the legislatures were composed . . . A legislature . . . not knowing well what to do, generally begins by undoing and disorganizing all that has been done before. At first they dig up the seed a few times to see that it is going to come up and after it appears above the surface they must pull it up again to see if there is sufficient root to support so vigorous branches; then lop off branches for fear they will exhaust the roots, and then pull it up again to see why it is so sickly and puny and finally to see if they can discover what made it die. And, as these several operations are performed by successive hands, no one can be charged with the guilt of destroying the valuable tree."

Knowing that others were writing goals for the Health Center, several of us in the School of Medicine suggested these:

The University of Connecticut Health Center is an integral component of the University of Connecticut and, as such, serves the purposes of the University which are the conservation, dissemination and advancement of knowledge. Only with commitment to all these aims can it achieve regional preeminence and national recognition and fulfill its obligation to the people of Connecticut, being responsive to their health needs in the broadest sense. The goal of excellence is the only goal which can achieve this in the long run.

The specific goals in this academic health center are:

1. To provide the best possible educational opportunities for residents of Connecticut to pursue careers in medicine and dentistry at the pre-doctoral and post-doctoral levels; and, in cooperation with health practitioners, to provide for continuing education. There shall be responsibility for the scientific and humanistic education of physicians, dentists, and biologic scientists; participation in the education of other health professionals in concert with other components of the University; and contribution to the education of the public in health matters.

2. To contribute to the advancement of knowledge for the improvement of the health of mankind and the quality of life. This is an obligation of all academic health centers, since understanding the basic mechanisms of disease will result in the greatest return on resources invested for health. Programs in research are central to the education of new biomedical scientist-teachers who will educate tomorrow's physicians and dentists, and to the attraction of a high quality faculty. The spirit of inquiry must pervade the health center, creating an intellectual environment which will attract and stimulate the best students, helping to form habits of lifetime learning.

3. To develop programs in patient care which will serve the needs of the State while sustaining education and clinical investigation; and to develop model programs in the provision of health services. All clinical programs should coordinate with and be complementary to those in the Capitol Area Health Consortium, and should be designed to encourage the rapid utilization of scientific and organizational advances.

The Health Center must remain responsive to the needs of the people while retaining the independence necessary to a strong university. Evaluation of all programs will provide for the thoughtful input from concerned and responsible members of the public, the health professions, and the academic community.

ROBERT U. MASSEY, M.D., Dean and Professor of Medicine, University of Connecticut, School of Medicine, Farmington, Conn.

REFERENCES

1. Michigan, House of Representatives, *Report of the Select Committee to Inquire into the Conditions of the University,* House of Representatives Documents, 1840, p. 470.

The President's Page

How many of you have ever thought of the evolution of accountability? My grandfather was born in 1833 and died in 1926. He was a rugged individualist and used to drive his horse and buggy about Waterbury in complete freedom. With the advent of the automobile, the city put a street light at the bottom of the hill off which he lived. This to my grandfather was an indication of the oncoming socialistic times. He was now accountable for his activities and had to stop when the light was red. This was traumatic to him.

Perhaps the medical profession is one of the last to become accountable. Perhaps we have been accountable to our patients but now we are being held accountable to not only the public at large and our peers but to the government as well.

This is reflected by the mass of health legislation which has been flowing out of the national and state governments in recent years, a prime example being the PSRO legislation.

But there are other accountability pressures on us as well. There has been in the last few years growing emphasis within our ranks and from outside sources on continuing medical education. This used to be completely voluntary. Then the staffs of hospitals began to require attendance at a certain number of scientific meetings and/or a certain number of hours spent on the subject each year. Recently certain specialty sections have required this for membership in the section—notably the Section of Family Practice.

The AMA has been watching and participating in this movement. There is a National Commission on Accreditation and a federation of regional accrediting commissions of higher education (Council on Medical Education—AMA; Advisory committees on continuing education—AMA and State Medical Societies).

Is there any relationship between quality care and accreditation? They think so. Participation in continuing medical education programs has increased greatly in the last few years.

Self-assessment programs are on the increase. Hospital programs get help from the medical schools.

The goal is the improvement of medical care. There is pressure from government, organizations, medical schools, literature, malpractice. It is necessary to develop a learning environment and evaluate results.

We learn only when we experience the need to know. More courses will be given at annual meetings and clinical congresses of the AMA. It is the feeling also that the AMA should take the courses to where the physicians are.

Video-tapes should be employed more. Specialty boards set standards for training. Medical audit and peer review are factors in this whole process. Instant recall may not be the best way to examine a person for recertification. However, we are moving toward the recertification process.

The movement of continuing education in Connecticut has been progressing slowly. A couple of years ago the House of Delegates of the Connecticut State Medical Society accepted the principle of compulsory continuing medical education. The House, however, reversed itself at its next meeting and substituted the word voluntary for compulsory. This reversal set the Committee on Continuing Medical Education back a bit, and that is how things stand now.

It seems to me that eventually this process will become compulsory even perhaps to the point of relicensure. If we wish to avoid the relicensure problem (and it already may be too late), we'd better get cracking on the credit for hours spent. It seems that now we are accountable not only for what we do but how we do it.

James H. Root, Jr., M.D.
President

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Letters To The Editor

Letters to the Editor are welcomed and will be published, if found suitable, as space permits. Like other material submitted for publication, they must be typewritten *double spaced* (including references), must not exceed 1½ pages in length and will be subject to editing and possible abridgment.

THE "PILL" AND MYOCARDIAL INFARCTION

To the Editor: I read in your journal "Myocardial Infarction in Young Women on Oral Contraceptives" by Roth, Kezler, and Swirsky, Vol. 38, Number 10, pages 524-527, October 1974 in which the conclusion is made that "myocardial infarction may occur more frequently in young women on oral contraceptives . . ."

This conclusion is made on the basis of three cases of which one lady smoked forty cigarettes a day, another "thirty or more" a day and the third, a non-smoker, had a mother who died from myocardial infarction age 53. One case each occurred in 1971, 1972, and 1973. All cases survived.

It is somewhat amazing that this article was published as the three cases and their circumstances prove nothing nor are extraordinary. In 1972, there were 77 female and 221 male deaths from myocardial infarction in Connecticut in the age group 15 to 44 included. There were 635 male deaths and 238 female in the age group 45 to 54 years. In other words, in both age groups the ratio female to male was a little more than one to three though the younger age group includes those ladies who would take contraceptive medication. Obviously, there is no evidence or suspicion that these medications cause myocardial infarction.

Articles with the scantiest or no evidence should not be published. They are harmful and counter the medical ethical principle of "nihil nocere." Many patients will have more heartaches and doubts when taking their pills, and if they discontinue great harm might be the consequence. The printing of this article is no credit to your Journal.

Gert Wallach, M.D., M.P.H.

Director of Health
Waterbury, Conn.

The above letter was referred to the authors of the article in question who offer the following reply:

To the Editor: Dr. Wallach states in his letter "that in 1972 there were 77 female and 221 male deaths from myocardial infarctions in Connecticut in the age group 15 to 44 included. This is a ratio of a little more than 1 to 3. In the older age group of 45 to 54 years, there were 635 male deaths and 238 female deaths again a ratio of a little more than 1 to 3, though the younger age group included those ladies who would take contraceptive medication." Should these figures be correct, far from disproving our suspicion they only tend to sharpen the suspicion that oral contraceptives may increase the death rate from myocardial infarction in young women.

Prior to the use of oral contraceptives Roth, Berki and Wolff found in 53 consecutive patients under 40 years of age with myocardial infarction only two females and 51 males. Gertler and White found only 3 females in 100 patients with myocardial infarction under the age of 40. Furthermore, other statistics show that this difference in the female to male ratio decreases in menopausal women. The fact that the ratio of younger females to males has become much lower as mentioned by Dr. Wallach, and indeed approaches the ratio of older females prior to introduction of the oral contraceptives needs an explanation and may possibly point to a causal connection of myocardial infarction and oral contraceptives. Furthermore, since our report in *Connecticut Medicine* I have seen two more young females, one in the mid-twenties with a nontransmural infarct and one in the mid-thirties with severe angina. Both were on oral contraceptives and they became asymptomatic after oral contraceptives were discontinued. While it may be true this is too small a number for statistical proof, it may be more meaningful if one considers the fact that I have not seen any other young women in the same period of time in the same age group with a myocardial infarction who were not on contraceptive pills, despite the fact that many young women are not using this method of contraception. Dr. Wallach suggests that our three cases may have occurred only by change. It should be made clear, however, that these three patients were detected during my work as director of an active coronary care unit where I personally see or review approximately 40 per cent of all hospitalized cases of myocardial infarction in the greater New Haven area. In addition, there have been other reports of small groups of young women on oral contraceptives who had suffered from myocardial infarction. Recently, it was reported by the *OB and GYN News* that the *Royal College of Family Physicians* stated that there is a suspicion that oral contraceptives may have a causal connection in young women with myocardial infarction.

I agree fully that every physician must adhere at all times to the Latin saying "primum non nocere." It was precisely in this spirit that we submitted our experiences for publication in a journal for physicians to draw attention to this possible serious side effect of oral contraceptive, only one more of the ongrowing list of side effects previously reported. We published it in order to warn physicians about the danger involved in continuing the pill in the presence of chest pain or chest discomfort as failure to pay attention to this warning could lead to sudden death. We felt that this possible harmful side effect was not known to every physician outside the specialty of cardiology. It is only by drawing attention to this possible problem that the suspicion existing at this time can either be confirmed or disproved by proper joint epidemiological and clinical studies.

Very truly yours,

Oscar Roth, M.D.

New Haven, Conn.

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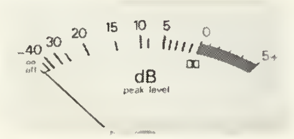

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Connecticut Medicine

Editorials

Connecticut Board Surgeons: Now and Tomorrow

This issue of *Connecticut Medicine* includes papers presented at the Annual 1973 Meeting of the Connecticut Society of American Board Surgeons. The high quality of these presentations again brings into focus the purposes of the Connecticut Board Surgeons, an organization unique among qualified surgeons in this country. Incorporated in 1948, this body has succeeded in fostering a full and frank interchange of views, cooperation and coordination vitally important in the continuing education of the surgeon. By so doing the surgeons have become better acquainted and been able to exercise a guiding influence in the development of surgery for the benefit of the people of Connecticut. In addition to their state wide prominence, the Board Surgeons have received recent national recognition for sponsoring state wide surveys of gastrointestinal bleeding and abdominal trauma. Such academic excellence has become expected as routine by fellow physicians. But now new challenges arise. Some members are searching for answers to meet the growing need for a participation by responsible surgeons in health care delivery, peer review, and the regionalization of certain surgical problems. The need and time are both at hand for the Board Surgeons to share in these new task

Robert J. Touloukian, M.D.

The Development of PSROs in Connecticut

PSRO means Professional Standards Review Organization.

Peer review means review of clinical work by equals—in this case physicians.

Before the 1940s Peer Review was initiated in hospitals in the form of audit, record and tissue committees. This consisted of retrospective review of charts and tissues.

In the 1960s utilization committees evolved in hospitals. These committees did retrospective review and some concurrent review with emphasis on length of stay.

For decades County Boards of Censors, ethics committees and review committees have been doing Peer Review, though in some areas of the state these committees got the reputation of white-washing the doctors.

Another movement that started in the 1960s was the formation of Foundations for Medical Care in Connecticut. Hartford County was the first of these to get started. This was followed by Greenwich and later by Waterbury in 1971, which subsequently merged with the Foundation for Medical Care of New Haven County. Peer Review and minimum standards of health care insurance contracts are the main purposes for the Foundations for Medical Care. They also provide a mechanism whereby quality care can be maintained at less cost and a mechanism whereby the physicians can be drawn closer together in a more unified group.

In an effort to strengthen Peer Review efforts in the state and in an effort to be prepared for pending legislation, the Connecticut State Medical Society (CSMS) in 1971 created a Statewide Peer Review Committee, which was named the Committee to Study Peer Review, Foundations for Medical Care and Health Maintenance Organizations (HMOs). In addition to this the committee functioned as a Peer Review Committee to work with the Connecticut General Insurance Company on Medicare B cases. This worked out quite successfully.

Then in October 1972, an amendment to the Social Security Law (92-603) was passed. This law contained the Bennet Amendment, which now commonly is referred to as the PSRO Law. An analysis of this law is not the object of this writing. Suffice it to say, its purpose was generally to review the quality of medical care at the local level with particular emphasis on the length of stay in hospitals. This law applies only to Medicare and Medicaid patients (38% of the population of the state) and any one else for whom the federal government is paying. It appears to be motivated primarily by the desire to control overutilization and to contain costs, though all written material refers to quality only.

The leadership of the reaction to this law in Connecticut fell on the shoulders of the Statewide Peer Review Committee, the name of which was changed subsequently to the Committee to Study Peer Review Systems. This committee was enlarged to contain representatives from all potential PSRO areas in the state.

With the support of the Council and the House of Delegates of the CSMS the committee opted strongly for a single statewide PSRO with the backup position of four PSRO areas, namely: Hartford County, New Haven and Litchfield Counties, Fairfield County and the four Eastern counties—Windham, Tolland, New London and Middlesex.

Late in 1973 HEW (Department of Health, Education and Welfare) denied our single statewide PSRO plan but granted our backup plan for four PSROs.

In December 1973, the AMA took the stand that it advised the states to implement PSRO development and that it would seek appropriate amendments to the law.

Next, groups of physicians, who, parenthetically, represented the leadership of the County Medical Associations of the PSRO areas, got together and organized their respective PSROs.

About this time, the idea of the Connecticut Medical Institute (CMI) evolved out of the Statewide Peer Review Committee. The long range objective of this was a Statewide PRO (Peer Review Organization), and the short range objective was to serve the PSRO areas as a Statewide PSRO Support Center (Technical Support Center).

The CMI was launched by a special meeting of the House of Delegates of the CSMS at which the House voted $30,000. to get the CMI started. This $30,000. was to be replaced by an assessment of $10.00 to each Connecticut State Medical Society member at the time of the next annual dues billing.

The CMI then organized its Board of Trustees, wrote its by-laws and incorporated. The Board of Trustees consists of five members appointed by the CSMS; two physician members of each PSRO (8); two members appointed by the CHA (Connecticut Hospital Association); one member each from CMS (Connecticut Medical Service), CBC (Connecticut Blue Cross), Connecticut Health Insurance Council (CHI), Office of Continuing Education of the medical schools of Connecticut, one physician member representing the Foundations for Medical Care in Connecticut, the Connecticut Commission on Hospitals and Health Care, the Commissioners of Welfare and of Health of the State of Connecticut—23 in all.

American Health Systems, Inc., was hired to help organize the CMI and to write and obtain from HEW planning grants for the CMI and the four PSROs. This was successfully accomplished.

Next, the CMI and the four PSROs each hired their executive directors and are now at this writing hiring their supportive staffs.

The PSROs contacted the local hospital administrators and utilization committees. The law states that if in the opinion of the PSRO the hospital utilization committee is qualified, it will be given the job by the PSRO of administering the PSRO in the local hospital.

The law also states that if 10% of the physicians in the PSRO areas petition HEW that they do not wish to be a PSRO, HEW will conduct a poll of all the physicians in the area. If more than 50% of the physicians and osteopaths in the area indicate that they do not want the area to be a PSRO, the PSRO will not qualify, and HEW then will appoint some other group to do the PSRO job in that area. The same will apply if the PSRO area cannot get at least 25% of its physicians and osteopaths to become members of the PSRO.

Also, if 50% of the medical staff of an individual hospital does not join the PSRO, the PSRO is not allowed to designate the utilization committee of that particular hospital to do the PSRO job in that hospital.

It must be emphasized that the PSRO law at present deals only with that portion of the population that is inpatient in an acute care hospital and that is paid for by the federal government or under a plan of the federal government such as Medicaid. This may be expanded, however, by law at a later time.

At present a membership drive is taking place in all four PSRO areas.

Also at present, norms, standards and criteria are being developed by all four PSROs and the CMI. It is important to know the definitions of norms, standards and criteria. They are:

Norms are the average range of performance given in statistical terms.

Standards are the range of allowable variations of performance.

Criteria are the measurable elements of health care as determined by professionals. These include indications for admission, length of stay, services consistent with diagnoses, indications for discharge.

What does it mean to the individual physician to join the PSRO? 1. It helps give the PSRO area the percentage it needs to be approved as an operating PSRO. 2. It helps give the hospital the percentage it needs to have its utilization committee designated by the PSRO to do the PSRO job at the local hospital level. 3. It means that the physician is willing to participate on the review committees of the PSRO.

During this membership drive it would be in the interests of practicing physicians for you to join your PSRO.

James H. Root, Jr., M.D.
President

Connecticut State Medical Society

PSRO—Step by Step

PSRO (Professional Standards Review Organization) was introduced on January 1, 1974. It is a federally authorized committee of doctors charged with guarding federal dollars paid through the Social Security Act by first guarding against the provision of medical services not considered medically appropriate.

The Senate Finance Committee, in voting Public Law 92-603, the 1972 Social Security Amendments known as H.R.I.—"it is preferable that organizations of professionals undertake reviews of members of their profession. Government should not have to review medical determinations unless the medical profession evidences an unwillingness to properly assume the task."

61 Steps to Assurance of Medical Necessity and Quality

PSRO applies only to federally funded programs offering direct patient service, therefore to less than a third of the estimated $90 billion that will be spent for health care this year. It doesn't apply to the other two-thirds of that $90 billion, the lion's share that comes largely through a combination of private health insurance and out-of-pocket payments by the patients themselves. Fitting PSRO into private health insurers' cost-control processes is a giant move that could overtax the newly developed capacity of a medical society to do the review, but could likewise "make" the PSRO by allowing it to provide the same controls across the board.

Government's interest is in both dollars and quality of care, but heavily weighted toward dollars . . . on the assumption that physicians are well-intentioned professionals who would be slow to let the quality of care slip, perhaps less slow to allow the cost of care to hike upwards. So government is addressing itself initially through the PSRO's to a newly watchful eye over who occupies an expensive hospital bed, for how long, and with what ordering of services. Efforts will be made to get physicians to keep their patients on a vertical basis (in less expensive but medically adequate facilities) and to use horizontal services in a $100-a-day hospital bed only where absolutely necessary for the patient's good health, not merely for convenience.

SELECTION

Step 1 HEW—through its regional offices—lets it be known which types of groups qualify. "First priority" is assigned to non-profit professional associations which include "a substantial proportion" of all doctors of medicine or osteopathy in the area to be served.

Step 2 HEW stresses that membership in the PSRO be voluntary, open to all physicians, "without requirement of membership in or payment of dues in any organized medical society or association."

Step 3* A local medical society *applies* to HEW to become a PSRO. It must have 300-plus physicians, must represent the majority of them, and must be qualified to do such review.

Step 4 If no local medical group applies, or if HEW finds applicants unqualified, or if "no organization meets the conditions," then HEW may name a PSRO which it feels could do the jobs called for in the act.

Step 5 The applying medical group must submit to HEW "a formal plan for the orderly assumption and implementation of (PSRO) responsibilities."

Step 6 HEW *reviews* the application, asking whether the local medical society has the expertise. "First priority" is given to local medical organizations; but, if local society can't/won't do the job, HEW could select a medical school, a local health department, a health insurer, even a paid group of MD's.

Step 7 If satisfied that the local medical society is qualified, HEW grants "conditional" approval to the fledgling PSRO, designates the geographical area to be served, and mandates a trial-performance period of not more than 24 months.

APPROVAL

Step 8 HEW then announces the conditional approval to all physicians in the area to be served.

Step 9 If more than 10% of the physicians in the area question the approval, HEW must poll the area's MD's to find out whether the approved group of MD's is acceptable to the local medical profession.

Step 10 If more than 50% of the polled MD's say "No," then HEW is prohibited from ap-

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Abstracted from Perspective, the Blue Cross Magazine, Second Quarter, 1973.

**EDITOR'S NOTE: Physicians who are not members of the Medical Society and osteopaths are also eligible for participation in PSRO.*

proving the group . . . and must search for another interested and capable organization.

Step 11 Either the "conditionally approved" PSRO or HEW can cancel the agreement on 90-day notice.

GUIDELINES

Step 12 Assuming the local medical society gets the PSRO designation, HEW issues a set of guidelines "to promote the effective, efficient and economical delivery of health care services of proper quality for which payment may be made" under the Social Security Act.

Step 13 A National Professional Standards Review Council shall also be set up to advise HEW. It will be composed of 11 physicians "of recognized standing and distinction in the appraisal of medical practice"—recommended by national medical groups, consumer groups, and other health care interests.

Step 14 A National Professional Standards Review Council and HEW will provide "such technical assistance as will be helpful in utilizing and applying norms of care, diagnosis and treatment." Regional norms will be permitted.

Step 15 In any state where there are three or more approved Professional Standards Review Organizations, HEW shall establish a Statewide Professional Standards Review Council to coordinate the PSRO's and to exchange information.

Step 16 The Statewide Professional Standards Review Council is to be made up of a representative of each PSRO, plus four MD's (two named by the state medical society, two by the state hospital association) and four persons "knowledgeable in health care" chosen by HEW from the state's residents.

Step 17 If the PSRO violates its obligations, the Statewide Professional Standards Review Council will review the report and make recommendations to HEW for action.

Step 18 If, after the trial-performance period (of up to 24 months), HEW finds the PSRO competent to carry out the assigned activities, the PSRO then is granted formal approval.

Step 19 If HEW finds the PSRO is doing the job well, with "adequate review and control," HEW may "waive review, certification or similar activities normally required" of intermediaries under the act.

OTHER REVIEW ORGANIZATIONS

Step 20 The PSRO is to "encourage all physicians in the area served to participate as reviewers" by "rotating physician membership of review committees on an extensive and continuing basis."

Step 21 The PSRO must "utilize the services of, and accept the findings of, the review committees of a hospital or other operating health care facility or organization located in the area served" when such committees have demonstrated competence.

Step 22 The PSRO may use three standards to judge competency of a hospital or Skilled Nursing Facility (SNF) review committee—whether "effectively and in timely fashion" it has reviewed (1) medical necessity of admissions, (2) type and extent of services ordered, and (3) lengths of stay.

Step 23 Where the intermediary has a data base useful to the PSRO—whether manual or automated—such data base will be supplied to the PSRO for help in developing norms of care.

Step 24 The intermediary must educate providers to accurate, consistent recording of medical data . . . and to generate reports from such data.

Step 25 The PSRO must use "methods of coding which will provide maximum confidentiality as to patient identity and assure objective evaluation."

Step 26 The PSRO must "keep and maintain such records in such form as HEW may require," and to "permit access to and use of any such records."

Step 27 The intermediary will audit providers as appropriate to make sure the intent of the law is being carried out.

Step 28 The PSRO must "determine and publish, from time to time, the types and kinds of cases (by type of health care or diagnosis, or in terms of other relevant criteria relating to the provision of health care services)" to be reviewed.

Step 29 The PSRO must arrange for "the maintenance of and the regular review of profiles of care and services received and provided to patients."

Step 30 The PSRO agrees 'to perform in an effective, timely and objective manner, and at reasonable cost the duties, functions and activities" required by law.

Step 31 HEW will pay the PSRO for its activity. Payments will be "equal to the amount of expenses reasonably and necessarily incurred."

PHYSICIAN NO-NO's

Step 32 Physicians carrying out the PSRO function in hospitals must have privileges in at least one hospital in the area, and "ordinarily should *not* be responsible for (but may participate in) review in any hospital" where privileges exist.

Step 33 No physician carrying out the PSRO function is permitted to review services provided to patients if he was either "directly or indirectly involved" in the case.

Step 34 No physician carrying out the PSRO function is permitted to review services provided to patients in any institution in which he or his family has "directly or indirectly" any financial interest.

Step 35 The PSRO is expected to inform and educate MD's, not punish them. As Sen. Bennett (R-Utah), father of PSRO legislation, said: "The thrust of PSRO is informational and educational, not punitive." The Senate Finance Committee hopes "the need for sanctions will be minimal."

Step 36 If a physician participating in a PSRO fails "in a substantial number of cases, substantially to comply" or "grossly or flagrantly" violates any obligations, or demonstrates "an unwillingness or a lack of ability substantially to comply, the PSRO may exclude him on a paid-for basis.

Step 37 If a physician is excluded from PSRO activity, and if he was involved in the ordering of services deemed "medically improper or unnecessary," HEW may fine him up to $5,000—or deduct it from fees due him from HEW via the intermediary.

Step 38 If the fined physician feels unjustly treated, he may apply for a hearing or judicial review by HEW . . . similar to the process under Step 59 and Step 61.

STANDARDS

Step 39 The PSRO is given "authority to determine in advance of any elective admission to a hospital or other health care facility" whether such admission is medically necessary.

Step 40 The PSRO is also given "authority to determine in advance of any other health care service which will consist of extended or costly courses of treatment" whether such services are medically necessary.

Step 41 For any service or item to be paid for under the Social Security Act, the PSRO is given the responsibility to determine whether "such services and items are or were medically necessary."

Step 42 On "proposed" in-patient cases, the PSRO must determine whether "such services or items could, consistent with the provision of appropriate medical care, be effectively provided on (a) an out-patient basis or (b) more economically in an in-patient facility of a different type."

Step 43 For in-patient care, the PSRO will "specify the appropriate points in time after the admission, at which the attending physician shall execute a certification that further in-patient care in such institution will be medically necessary."

Step 44 The PSRO must use certification points, "usually not later than the 50th percentile of lengths of stay for patients in similar age groups with similar diagnoses," that are "consistent with and based on professionally developed norms of care."

Step 45 For services provided, the PSRO is expected to determine whether "the quality of such services meets professionally recognized standards of health care."

CLAIMS REVIEW

Step 46 The intermediary creates a "technical review team" to review questionable claims . . . relating to the PSRO through the intermediary's medical advisor.

Step 47 The PSRO is obligated to review only cases involving Medicare, Medicaid, Maternal & Infant Care (MIC), etc.—paid for under Social Security Titles 18, 19, 5, etc. But it may, with approval of private health insurers, review cases of privately insured persons.

Step 48 The PSRO is obligated to review only institutional care (hospitals, skilled nursing facilities, etc.). But it may, with approval of HEW, take on review of physician services and fees.

Step 49 The intermediary receives claims from providers (for Medicare recipients, and for

Medicaid recipients where an intermediary is involved), then reviews the claims to identify services not covered by the programs.

Step 50 Under Medicare, the principal exclusions (non-covered services) are services for personal comfort, routine physicals, eye exams, hearing exams, cosmetic surgery, dental treatment, foot care, and custodial care. Medicaid is less restrictive.

Step 51 Claims for non-covered services are denied, with no role for the Professional Standards Review Organization to play.

Step 52 The intermediary reviews all other claims for appropriateness of care (medical necessity, length of stay, level of care, etc.) and—on the basis of recommendations by the PSRO—makes a decision about denial of any inappropriate care.

Step 53 The intermediary, carrier or other claims processor then denies payment, based on the specific reason: lack of medical necessity, inappropriate stay, inappropriate facility, etc.

TURNED-DOWN CASES

Step 54 Early in the life of PSRO's, the intermediary will determine whether the patient did all he could to avoid the provision of unnecessary care. If he did, he is "held harmless," with nothing to pay; otherwise, he pays for the unnecessary care. (Later the PSRO will assume this function.)

Step 55 Early in the life of PSRO's, the intermediary will also determine whether the provider exercised "due care" in giving care. If "due care" exists, the provider is paid; if not, provider does not get paid. (Later the PSRO will assume this function.)

Step 56 In cases where the PSRO disapproves of the provision of services "provided or proposed to be provided," the PSRO notifies the provider, practitioner, or other organization or agency. And the provider, practitioner, whatever, must then tell the patient.

Step 57 Where a claim has been denied, and the patient is dissatisfied, a reconsideration hearing is required of the PSRO. If the PSRO reaffirms its disposal, the Statewide Professional Standards Review Council then hears the matter if it involves $100 or more of expense.

Step 58 If the statewide council disagrees with the PSRO, the council "revises" the denial.

Step 59 If the statewide council agrees with the PSRO—and thereby reaffirms the disapproval of care, HEW will (a) give the claimant a hearing and (b) make the final determination.

Step 60 The PSRO's disapproval is then transmitted to "the agency or organization having responsibility for acting upon claims for payment," namely the intermediary, carrier, or other organization named by HEW to carry out claims processing.

Step 61 If a case involving bigger dollars ($1,000 or more) is disapproved—and if the statewide council agrees with the disapproval—HEW will (a) grant a "judicial review" and (b) make final determination.

Reflections of a Past President of the American Medical Association (1972-73)

Charles A. "Carl" Hoffman, M.D.

Since returning to my home town of Huntington, West Virginia, I spend most of my working day in the practice of urology. I find on occasion that I sit and reminisce on my terms as president-elect and president of the American Medical Association—interesting and exciting experiences which, if one is dedicated to doing a good job of feeling the pulse of the physicians of this country and carrying on a successful dialogue with them—consume approximately 95 per cent of his time.

I traveled and talked with physicians from Alaska to Florida, California to the New England states, and those physicians in the National Health Corps. I worked with the Blackfeet Indians on their reservation in Montana, studied the problems of health care delivery among the Indians in the Navajo nation in our Southwest and visited the ghetto areas of New York City.

Physicians in Alaska

Alaska, as I have often said, is the most exciting state in our Union. It has a very small number of physicians distributed unevenly over a state that geographically has three time zones. Alaskan physicians would seem to be pioneers, not necessarily in scientific medicine, but living with the challenge of providing good medical care in areas which often must be reached by a veteran bush pilot.

During an annual meeting of the Alaska State Medical Association, I found that physicians were interested in bringing good medical care to their patients, although frequently handicapped in doing so. As an example, the Eskimos have an experimental program with headquarters in Nome. The Eskimo women are trained in hospitals for a short period after which they administer medical care in the Eskimo villages where they reside.

Every Monday at noon, calls come in by radio phone from 16 Eskimo villages covering 600 square miles of the Seward Peninsula for the purpose of going over cases with the physicians in charge of the hospital. In obstetrics they deliver multiparas. The primaparas and acutely ill patients are brought into Maynard McDougall Memorial Hospital either by airplane or on some occasions by snowmobile—and even on rare occasions by dog sled. The physicians of Alaska impressed me greatly.

The 'Under 48' States

Now let's turn our attention to the "Under 48," as Alaskans know the 48 states below Canada and excluding Hawaii. California, which holds 10 per cent of our population and probably 10 per cent of our physicians, is somewhat unique in that it has almost every type of physician and almost every type of practice within its boundaries. Here we find a mixture of ultra-conservatives and ultra-liberals, with all the gray areas in between. California is exciting. I enjoyed several visits to that great state.

The Northcentral states which have a strong conservative element among their physicians also have a small representative group with ultra-liberal leanings and, as they express it, from a practical approach attempt to work with the government on both the federal and state levels to provide the best care.

The physicians of Texas are primarily ultra-conservative, as are those in Oklahoma and Louisiana. As we move North, East and West, we find conservatism a little less obvious.

Emergency Care Systems

One cannot travel across this country without recognizing the emphasis that physicians and communities are placing on offering a good emergency care system—particularly in the rural areas where I have found that well-equipped ambulances are provided with programs for training personnel to work through a central call system. Although Idaho, Texas and Florida are among the leaders in this service, I found every section of the country is working hard to provide better emergency care systems.

Recent federal legislation providing funding for these programs will accelerate this activity.

Relations With the News Media

Throughout my term of office I had constant contact with the news media—press, radio and television. Frequently, the press conferences were held in airports as we visited various cities. I recall with satisfaction a three-hour radio talk show in Honolulu—which I accepted reluctantly—with Teddy Medina as the host. We found that questions were still coming in when the show went off the air at midnight. The questions most asked concerned drugs, alcoholism,

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DR. CHARLES A. "CARL" HOFFMAN, Immediate Past President of the American Medical Association; a urologist in Huntington, West Virginia.

fertility, cancer treatment, medical care costs, and I even had one caller ask how he could get his wife pregnant.

Although I have heard frequent criticism of the news media, I sincerely believe that I was treated more than fairly. On one or two occasions I was misinterpreted, but I am sure this can, and does, happen frequently.

As Chairman of the Public Relations Committee of the American Urological Association for many years, I had the opportunity to work with the news media frequently. I always followed the advice given me by a cigar-chewing newspaper veteran who suggested that I always be honest with the press. He cautioned me that if they did not like me they could create a great many problems for me. If they did like me, and my answers were honest and above board, they would treat me fairly. I have found this to be true.

Visiting With Other Groups

As a member of Rotary for many years it was exciting to speak to the many service clubs throughout the land such as Rotary, Kiwanis and the Lions. I often recall with pleasure the experience of speaking before the Economic Club of Detroit. From the Press Club meeting in the morning, meeting with visitors, as the luncheon speaker and through the question-and-answer period, Detroit and the Economic Club were most impressive.

Speaking to hospital staffs was rewarding. It was here that I had the opportunity to study the high quality of medicine in this country. I participated in the dedication of the new Intensive Care Unit of the Parkview County Hospital in Riverside, California. Also, I helped dedicate the Lawrence County Hospital's new wing in Ironton, Ohio, and the new Imperial Point Hospital in Fort Lauderdale, Florida.

Objectively visiting hospitals of all sizes in every part of the country one can appreciate the high quality of care offered in cities as small as 25,000 people, and in some of these small towns we find hospitals with excellent intensive care units, excellent departments of obstetrics and urology, and well-trained staffs. This is the great difference in the quality of medical care in the United States and most foreign countries. In most foreign countries we find a great dropping off in the quality of medical care offered when we leave the large teaching hospitals and go into the smaller cities. Here wo do not have that great difference.

Meetings With National Leaders

One of my great thrills was sharing the platform with President Lyndon B. Johnson in the celebration of the 75th Anniversary of the Scott and White Clinic and Hospital in Temple, Texas. Temple is a town of 33,000, and the activities were held in the high school auditorium. The program was beautifully organized, including a rehearsal in the afternoon. I spoke prior to the President, and when I came down from the stage Mrs. Johnson thanked me with sincere warmth for my comments. The President then made some nice remarks about physicians and the medical profession in general. After the program I had the opportunity of having a long visit with President and Mrs. Johnson and some of their close friends.

In October 1972 I received a call from the White House inviting me to meet with President Nixon the following week. To one who loves America, a visit to the White House is always exciting and impressive. Mr. Nixon was extremely cordial during our half-hour meeting in the Oval Room where we discussed many of the problems of delivering health care in this country, distribution of physicians and training of physicians, and also the quality of medicine offered to our people. We quickly agreed that our country enjoys the highest quality of health care in the world, but we do have problems of physician distribution and the weakness in our catastrophic coverage.

Interestingly, when he asked what I considered the most serious problem facing medicine today, I answered "cancer," and this I firmly believe.

Other exciting and interesting experiences included a speaking engagement before the American Legion at its annual meeting in Chicago, being followed immediately on the program by presidential nominee George McGovern. As an old practicing pharmacist I found it a thrill to speak before the National Association of Retail Druggists during its annual meeting in New Orleans. I shared the platform with Sen. Hubert H. Humphrey on this occasion.

It was a real pleasure to speak to the members of the National Student Medical Association in Philadelphia. My invitation was extended by Doctor Vernon Smith, an outstanding young physician and one from whom I expect great things.

It is always a pleasure to appear before scientific organizations such as the Society of Advanced Medical Systems.

My tenure of office permitted me the opportunity to speak before meetings of the American College of Radiology, American College of Surgeons, the American College of Legal Medicine, the American Academy of Family Physicians, the International College of Surgeons and the American Podiatry Association.

I also was highly honored, because of my office, to be invited to give the commencement addresses and receive honorary degrees from Drury College, Springfield, Missouri; Radford College, Radford, Virginia; Alderson-Broaddus in West Virginia, the University of Cincinnati and Marshall University in Huntington, West Virginia. Mine was the honor, also, of receiving the first Honorary Associate of Science Degree from the West Virginia Northern Community College.

I was honored with the recognition of Distinguished Alumnus Awards from Ohio State University and Marshall University.

Early in my presidency, my wife Margaret Lynn and I were invited by the Medical Workers Union of the Soviet Union to visit and study their emergency care system. During that same trip I took advantage of the opportunity to study the health care delivery systems of Sweden, England and West Germany.

Later I visited Israel, and still later visited Brazil through an invitation from Dr. Murillo Belchior, an outstanding person, who is President of the Federal Council of Medicine (this is the body which licenses all of the physicians of Brazil).

In Brazilia I was invited to address the combined health committees of the House and Senate. The President of the Senate presided.

The great reward from these studies was that I learned there is no perfect system in the world; that we offer the highest quality of medicine in the world, and that our people would not accept the type, quantity and quality of medicine which those in other countries consider satisfactory.

I cannot forget the pleasant and educational experience of speaking before the New England Hospital Assembly, a group I was amazed to learn had over 12,000 registrants.

Speaking to groups such as the Tufts University School of Medicine Alumni Association in Hyannis, Massachusetts; and the Alumni Association of the University of Virginia School of Medicine in Charlottesville, was most rewarding. The California Hospital Association and the Southeastern Hospital Association were also interesting and outstanding groups.

I could not help but note the enthusiasm of our medical students in speaking before the students of different schools. The same enthusiasm could be found in the students of pharmacy, dentistry and the nursing professions. There is no doubt that the future of medicine in the United States is in good hands.

It is not wisdom to attempt to list the 30 state medical associations I was asked to address in assemblies on various subjects, and in several instances I visited the state association groups on more than one occasion.

As one would expect, it was here that I frequently found great differences of opinion on many issues. Here one finds physicians who have strong convictions on such issues as malpractice, controls—either by federal or state government or hospitals—and yes, even on abortion. Even though they may disagree on certain subjects, they are personally convinced that what they believe is in the best interest of their patients.

Importance of County Medical Societies

It also would be impractical to list all of the county medical societies I had an opportunity to visit and to whom I spoke—numbering 27 in all.

Here at the county level the difference of opinion is less noticeable, for here you have the locality influence. The county society is undoubtedly the "grass roots" of organized medicine, and although those physicians interested in the society are aware of the national issues as they affect their practice, I believe that the majority of county society members attend meetings infrequently, are interested primarily in their work, with some recreation, and are not primarily interested in socio-economic affairs.

At the county level the officers must work extremely hard to hold high interest among their members on national issues involving health care.

I have found that the executive secretary at both the county and state level is a most important cog in keeping things moving—particularly in socio-economics. One example is the Executive Secretary of the Hampton District Medical Society in Springfield, Massachusetts—Mrs. Vivian M. Purdy.

It should be noted, however, that physicians at the local level have tremendous interest in scientific programs.

I have often been asked if there is a great difference in the hospitality shown visitors in various parts of the country. Margaret Lynn and I found unusual warmth and hospitality accorded us whenever we visited county and state medical groups, whether in New England, Florida, Washington State, the Southwest or our great central states. Each section seems to show its hospitality in a little different way, but it is easy to sense the warmth which was there when we stepped from the plane to meet a welcoming group—either from a county or state medical organization, the Chamber of Commerce, or any of the many associations made up of professional people.

Ethics in Medical Research As Viewed by the Clinical Investigator

David M. Engelhardt, M.D.

It might be well if I prefaced my remarks with a brief description of the basic principles underlying clinical investigation. I am proceeding on the assumption that there are some of you who do not have a very clear picture of what clinical experimentation with drugs entails. Perhaps, following this brief description it will be easier for you to judge what constraints need to be placed on the clinical investigator in order to assure full protection of the safety and dignity of the experimental subject, as well as what constraints should not be placed upon the investigator, lest his ability to obtain reliable and useful medical information be nullified.

Evaluations of drugs for use with patients is a complex enterprise. I am often required to evaluate new drugs whose safety and efficacy have not been fully established. Prior to initiating a drug study, I will have at my disposal information on acute and chronic toxicity studies in mice, guinea pigs, and occasionally larger animals, studies which may have little relevance for a human population. I will have some human toxicity data, which may again have only partial relation to the effect of these drugs on sick people, as they generally are obtained on physically healthy volunteer prisoners. Finally, I will have a variable amount of information, never too much, on clinical trials with patients. Since I happen to be involved in studying the effects of new psychoactive drugs on outpatients, I generally require a greater amount of information about trials with patients than an investigator who is working under the controlled conditions that a hospital offers.

Since nothing is clear-cut in this world of ours, the data I will receive, both in terms of animal and human trials, will be equivocal in a number of areas and will lack specific guarantees for my particular patients. I must, therefore, satisfy myself with a reasonable amount of information which I can expect a responsible pharmaceutical firm and the medical literature to make available to me. It is hard to define in advance what a "reasonable amount" is. What I seek before I begin a formal experiment is sufficient reliable information to support a reasonable expectation that the patient's welfare will not be jeopardized by the drug and that he may benefit from its administration. Fortified with additional information derived from a cautious pilot study, I may now undertake a more systematic controlled study of the drug's action.

My task is to determine if the drug is safe and clinically effective, for what population, under what conditions, and to be able to say with a fair degree of certainty that the beneficial (or harmful) effects observed are attributable to the drug's pharmacological action and not to incidental nonspecific factors such as the concurrent psychotherapy, the doctor's expectations, or the friendliness of the clinic receptionist. To be able to draw such conclusions I must increase the number of patients that I study so that I can assign randomly half of the patients to drug treatment and half to placebo treatment. In other words, I will be treating all patients identically except for the drug they are receiving. If it turns out that the drug-treated patients do significantly better than the placebo-treated patients, I am ready to make a statement about the drug's effectiveness, provided I can rule out the possibility that the superior results with active treatment are not the consequence of the doctor's or patient's expectations of better results with drug as opposed to placebo treatment. It is a well established fact that the doctor's expectation as to outcome will often influence outcome either by convincing the patient that he is better or by perceiving the patient to be better when, in fact, nothing has changed.

I must, therefore, not only control for nonspecific treatment factors by use of a placebo group, but must also control for the effect of treatment bias by administering the drug under so-called "double-blind" conditions. This means that neither the patient nor the doctor knows which of the two identical-looking pills or capsules contain active medication or placebo. Having done this, I am more likely to come up with reliable and valid data concerning a drug. If there is already an established form of treatment for the given illness, then it may not be sufficient to establish the experimental drug's superiority

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This paper was presented at the Annual Meeting of the New York State Medical Society on February 16, 1968 at a symposium on Ethics in Medical Research and Reporting, jointly sponsored by the New York State Journal of Medicine and the American Medical Writers' Association.

over placebo. I may have to compare simultaneously, under double-blind conditions, the experimental drug with placebo and the standard drug, in order to establish the experimental drug's efficacy in relation to the accepted standard treatment.

Despite every possible precaution to protect a patient from harm, is it possible for the clinical investigator to guarantee a patient that he will suffer no deleterious effects as a result of the experiment? Such a guarantee is impossible. I need only remind you of these tragedies that visited countless homes as a result of the use of Thalidomide. This brings us to the question—what do I tell my patient prior to the experiment? To conduct the experiment I need the consent of my patient. He, in turn, in his best interest, should not consent without being fully informed as to what he may be getting himself into. If I were to tell the patient that I am uninformed about *all* the possible hazards entailed in taking the experimental drug adding, in all honesty, that it might kill him or produce maimed offspring as Thalidomide did, I might just as well close shop. If, in the public interest, the experimental drug deserves a clinical trial, then to present all remotely possible hazards in such as fashion as to frighten all experimental subjects away would be acting irresponsibly and against the public interest. At the same time, I would give up clinical research if a patient's consent could only be obtained by misrepresentation. The only way for me to resolve the problem of informed consent, considering the patient's rights and needs as well as the realities of the situation, is to tell my patient that I have carefully and comprehensively familiarized myself with all that is known about drug "X" and that I firmly believe the drug to be of potential value in his particular disorder and to be essentially safe. However, if I *am* aware of any serious hazard but want to test this drug because of certain valid considerations, I then inform my patient of these hazards. But let me emphasize that the basic problem of informed consent does not lie in the ethics of the investigator, but in his ignorance. As a clinical investigator, I know of no way in which I can guarantee myself or my patients that there will be no "Thalidomide tragedy."

Most people concerned with the patient's rights and safety fail to realize that the written informed consent is hardly what its name implies. Perhaps some of you are aware of the fact that a year ago I was cited for failing to obtain written consent from about 3,000 psychiatric patients attending my research clinic over the past ten years. In failing to get written, as opposed to oral consent which was obtained, I was violating New York City Department of Hospitals regulations. This fact received considerable publicity in the news media.

What is the nature of the written consent that the Department of Hospitals required that I use and to which I had consistently objected? The form is titled, "Patient Consent for the Use of New Drugs, Treatment and Procedures for Investigational Purposes." It provides for the patient's name, age, etc. and the following statement: "I hereby agree to participate in a program involving the experimental use of a new drug and/or treatment or procedure for investigational purposes as indicated below." At this point is entered the name of the drug, treatment, or procedure. Following this is really what represents the heart of the consent form, which states: "I (meaning the patient) hereby release the City of New York, its physicians and other staff, including nursing personnel from any and all responsibility for the results due to my participation in this research program." There is room for a date, the patient's signature, and the signature of a witness.

In my opinion, the above does not represent informed consent by any stretch of the imagination. The written form's primary purpose seems to be to protect the Department of Hospitals from a lawsuit, not the patient from harm. The majority of written consent forms used across the country are not essentially different. While many have had the good taste not to slip in a waiver, which has nothing to do with the patient's need for information, they essentially state that the patient has been informed of the possible side effects and hazards of the drug to be used. They do not state precisely what information was given to the patient. Obviously, "written informed consent," if it is not to insult the intelligence of the participating subject, must be expanded to include more than is currently required by the law and by most institutions.

On the other hand, it is almost impossible to spell out in writing all the possible hazards that a patient may experience in the course of experimental drug treatment. I have encountered severe drops in blood pressure resulting in shock-like states and requiring hospitalization in patients who received placebo, but who thought they were receiving chlorpromazine (Thorazine), a tranquilizer, to which they had previously reacted with a significant drop in blood pressure. Is the investigator to warn the experimental subject that he may develop serious side effects, requiring hospitalization, on placebo? I am not trying to be facetious; I really do not know the answer to this question.

Following the public expression of concern, expressed by newspapers and public officials, I prepared a written consent form to be signed by the patient and/or relative. Despite its comprehensiveness, sincerity, and concern for protecting the patient rather than the institution, the form still falls short of the ideal informed consent. Since the majority of my subjects are not only laymen, but chronic schizophrenics, it is highly questionable whether they can grasp the essential meaning and intent of the consent form.

There are many other areas which bear on the issue of clinical research and which deserve consideration. One of these is the Hollywood portrayal of the clinical investigator. Let us not too quickly pooh-pooh the destructive effect of such portrayals. I am sure no reasonable adult really believes that clinical experimentation invariably involves mad physicians with foreign accents, working in underground laboratories with generators for static electricity, whose scientific productivity is limited to the creation of monsters. But, I wonder to what extent, having seen such films in childhood a reasonable adult is not likely to react unconsciously to these uncritical impressions of childhood. On the other hand, this distorted image of the investigator can on occasion be projected by an irresponsible scientist. If Hollywood had come up with a script involving a scientist injecting live cancer cells into human subjects, wouldn't we consider this a typical Hollywood Grade B science-fiction movie?

We cannot ignore the fact that a system of checks and balances is necessary that safeguards the rights of the investigator to seek valid and useful clinical information that protects the experimental subject from unethical or irresponsible experimental procedures. My behavior as a scientist is not immune to my personal and personality needs and may at times be dominated by those needs. Nonetheless, a Thalidomide tragedy or the injection of live cancer cells into human beings should not lead to irresponsible or intemperate condemnation of all clinical investigators and clinical investigation, lest such action do more harm to the public interest in the long run than the injection of live cancer cells into human subjects. Because clinical research directly involves not only the experimental subject and the clinical investigator, but also the welfare of the community at large, the public has the responsibility not only to regulate but also to protect the legitimate rights and needs of both the subject and the investigator.

In summary, I would consider the following statements reasonable with regard to clinical investigation with experimental drugs:

1. Despite occasional tragedies such as the case of Thalidomide, experimentation with drugs has proven remarkably safe. This is because, despite the flaws in the system, most investigators are responsible individuals and most drugs are carefully screened before they are used in a controlled experiment with humans. The average experimental subject is exposed to much less risk than the average occupant of a car.

2. Informed consent is a relative term. There are limits to the extent to which some patients are able to comprehend the real meaning of the information they receive. There are limits to the amount of information available to the clinical investigator. While the investigator has the responsibility to present the patient with the relevant information with respect to a drug's safety and efficacy, the patient's consent, more often than not, is based more on his confidence and faith in the investigator than on the information provided by him.

3. The patient who volunteers for drug research is not doing the clinical investigator a personal favor since such experimentation is in the public's interest. Such research, however, is only possible if it is the product of a free partnership between the doctor and his patient. Such a partnership is the foundation for ethical and effective research.

4. Clinical investigators are human, with human frailties and vested interests. Because the clinical investigator is human he must allow himself to be subjected to public scrutiny and control. However, such scrutiny and control must not destroy his freedom to work, must not diminish his enthusiasm for his work, and must not involve his being portrayed as an enemy of the people from whom the experimental subject must be protected. Unfortunately, we have no universally accepted standards for drug safety and efficacy. Ethical and competent research cannot be legislated into existence. Perhaps, in the final analysis, we may have to set up specialty boards for clinical investigators as we do for other medical specialties. In certain European countries certification of clinical investigators is already the practice.

5. And last, let us not forget that in today's world of mass media and consumer interest, honest, unbiased and skillful reporting of medical news is as important as honest, unbiased and skillful clinical research.

Fostering Understanding Between Science and Law

James W. Curlin

Technological advances have caused social problems, and their solutions demand co-operation between lawyers and scientists. But the interdisciplinary approach will be a long time coming. A recent survey of lawyers' attitudes toward scientists indicates just how far away mutual understanding is.

THE RESOLUTION of social conflict is the *raison d'etre* of law, and lawyers and the courts are in the thick of the current conflict between technology and society. Technology's disquieting advances have resulted in an increase in legal activities in environmental protection, consumer affairs, and rights of the disadvantaged. Failure of our social and political institutions to deal effectively with these issues has resulted in numerous legal actions, notwithstanding the evidence that courts are ill equipped to resolve these conflicts in an effective and lasting way. Nevertheless, courts have played, and will continue to play, an important role in limiting the social costs imposed by the application of technology.[1]

Interdisciplinary Approach Necessary

Conventional cases among single-party litigants have given way to class actions and statutory suits against the sovereign. A lawyer dealing with environmental and technological problems is best with a confusing mixture of scientific facts, conflicting expert opinion, and value judgments. Law schools have done little in the past to prepare students for the interdisciplinary approach necessary to the solution of complex societal problems. Legal education is often acquired in isolation from the rest of the university community, although there are notable exceptions. Faculties tend to be monolithic and to produce law graduates in their own image. Certainly, there are similar problems of interdisciplinary communication in other professions as well. Universities are organized into colleges and departments that represent artificial divisions of knowledge and experience that are not conducive to interdisciplinary co-operation.[2] This analogue carries over to postgraduate, nonacademic institutions as well.

Communication problems are of particular concern to the legal profession because lawyers must synthesize the knowledge of specialists into a usable and understandable body of general knowledge to solve problems. My comments are not intended as a condemnation of legal or scientific education, but rather as perspective for understanding the results of the survey discussed below.

Aside from cosmetic treatments or "brush-fire" approaches, the solution of major sociotechnical problems can come only from a co-ordinated interdisciplinary approach.[3] Exchange of information among the disciplines must be developed to its fullest. Scientists and lawyers have not yet established efficient lines for transferring information. This problem was discussed at the Airlie House conference on environmental law in September, 1969:

> . . . Open lines of communication not just in one direction, but make sure the feedback is fed back where it can be meaningfully acted upon. Unless the . . . law schools . . . that can afford it and the major scientific organizations and the trial bar agree that each has something to tell the others, and, more important, that each has something to ask the others, we will get nowhere.[4]

A survey conducted by the Oak Ridge National Laboratory under the sponsorship of the National Science Foundation attempted to evaluate the extent of the communication gap between law and science. The Natural Resources Law Section of the American Bar Association co-operated in the survey. Its membership of twenty-three hundred lawyers active in the area of natural resources and environmental management law served as an experimental population.

A questionnaire was designed to (1) identify the professional activities and characteristics of the respondents; (2) identify the sources of scientific information used by the bar; (3) evaluate possible options to improve communications between scientists and lawyer; and (4) solicit opinions, criticisms, and suggestions concerning improvement of the transfer of information and professional relationships. The questionnaire was mailed to the entire section membership, and 25 per cent responded—a good response for mailed questionnaires.

A majority of the 575 respondents who replied were associated with law firms primarily involved with general practice (see Table 1). Approximately one-fourth were employed by corporations or businesses, the majority of which are in the distributive or extractive industries (fossil fuels or minerals). Sixty-five per cent of all respondents were in the general practice of the law. Few considered themselves specialists in environmental or natural resources law. Of those in general practice, 18 per cent represented organizations within the extractive industries; the remainder were equally divided among distribution, regulatory, electrical generation, and manufacturing.

Individually, lawyers associated with law firms or classified as self-employed general practitioners dealt

---

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TABLE 1

RESPONDENTS AND PERCENTAGE OF RESPONDENTS BY FUNCTION IN ORGANIZATION

Organization	*General Practice*	*Distribution*	*Extractory*	*Regulation*	*Electrical Generation*	*Primary Manufacturing*	*Secondary Manufacturing*
(1) Law Firms	277 (73%)	5 (14%)	23 (22%)	10 (22%)	3 (>12%)	4 (19%)	1 (10%)
(2) Corporations	9 (3%)	25 (72%)	71 (68%)	4 (9%)	18 (75%)	10 (48%)	8 (80%)
(3) Self	77 (21%)	3 (9%)	8 (7%)	3 (7%)	3 (>12%)	0	1 (10%)
(4) Federal Agencies	3 (<1%)	0	0	9 (20%)	0	1 (5%)	0
(5) Universities	5 (1%)	0	0	2 (4%)	0	0	0
(6) Local Government	5 (1%)	2 (5%)	1 (<1%)	14 (31%)	0	0	0
(7) Industrial Associations	0	0	2 (1%)	3 (7%)	0	6 (29%)	0
(8) Private Conservation Organizations	2 (< 1%)	0	0	0	0	0	0
TOTAL	378	35	105	45	24	21	10

TABLE 2

TEN MOST READ PERIODICALS AS SOURCES OF SCIENTIFIC INFORMATION

Rank	*Popular*	*Scientific/Specialty*	*Legal*
1	Wall Street Journal	Oil & Gas Journal	ABA Journal
2	Business Week	Scientific American	Natural Resources Lawyer
3	Time	Oil Daily	BNA Environment Reporter
4	National Geographic	Air & Water News	Texas Bar Journal
5	U.S. News and World Report	Science News	Harvard Law Review
6	Fortune	Sierra Club Bulletin	Land & Water Law Review
7	Newsweek	National Wildlife	Rocky Mountain Mineral Law Review
8	Life	Natural History	Business Lawyer
9	Kiplinger Report	Audubon Magazine	Texas Law Review
10	New York Times	Science	American Judicature Society

primarily with real property matters, fossil fuels, minerals, and water problems in that order of frequency. Corporate practitioners were primarily involved with fossil fuels and minerals. The respondents who actually engaged in trial practice reported the highest frequency of litigation in oil and gas, followed by water pollution, water rights, zoning, air pollution, and minerals.

Respondents were asked to identify the literature they read for technical information. The ten most frequently mentioned popular, scientific, and legal periodicals are shown in Table 2. News weeklies and newspapers with wide national circulation were most frequently mentioned among the popular tracts. The predominance of oil and gas interest among the respondents was reflected by the frequency with which the *Oil and Gas Journal* and *Oil Daily* were listed in the scientific and specialty category. A significant number read *Scientific American*, a monthly magazine featuring popularized articles of broad scientific interest. Several periodicals that feature conservation and natural history content are also widely read.

The *American Bar Association Journal* and *Natural Resources Lawyer* were the most frequently listed legal publications—not surprising considering the survey population. The *Environment Reporter* followed the Association's publications in popularity. Numerous other periodicals, newsletters, and law reviews were mentioned by the respondents, but none stood out prominently. From the number of titles listed by the respondents, it is evident that information about natural resources and the environment is being widely read in many general sources.

Nine specific yes-no questions dealing with improvement in the exchange of information were posed. Questions and responses are shown in Table 3. The consensus of responses may be summarized thus:

1. Communication between scientists and lawyers is inadequate.

2. Scientists and lawyers should cross-publish in each others' journals.

3. There is no consensus on the need for new interdisciplinary journals.

4. Briefings and workshops should be held at universities and laboratories to familiarize lawyers with current developments in science and technology.

5. Scientists should participate in American Bar Association programs and meetings.

6. Special sessions should be organized for lawyers at national and regional meetings of scientific associations.

7. Scientists should write and communicate more clearly to enhance understanding by lawyers and laymen.

8. A system of environmental indexes is needed to describe the state of the environment in readily understandable terms.

Respondents were invited to comment on the subject of interdisciplinary communication. Almost every respondent contributed. The comments fell into three general categories: criticisms of scientists; criticisms of lawyers; and suggestions for improving communications. Of the three categories, a majority of the comments dealt critically with science and scientists.

Many respondents perceived scientists and engineers to be narrow in their social outlook and provincial in their approach to problems:

> Scientists tend to specialize in professional subareas and the positions they advocate fail to recognize the broader general implications.
>
> Most scientists remain academicians, aloof from the community.
>
> Scientists tend to disregard the human factors and respect the "truth" of only those things which can be enumerated and quantified . . . [they] tend to measure human responses by slide rules.
>
> . . . their political notions are absurd.

TABLE 3

CLOSE ENDED QUESTIONS AND RESPONSES

	Percent	
	Yes	*No*
1. Communications adequate	14	86
2. Scientists should publish in legal periodicals	85	15
3. Lawyers should publish in science periodicals	79	21
4. New periodicals should be created	59	41
5. Special briefings at universities and laboratories	77	23
6. Scientists on programs of ABA and other legal associations	88	12
7. Scientists should develop special sessions at national and regional meetings for lawyers	77	23
8. Scientists should write to be better understood by lawyers	75	25
9. Environmental indices needed	84	16

The veracity and objectivity of scientists and engineers were questioned by a large proportion of the respondents:

> Scientists are often arbitrary about matters, believing they have the only set answers . . . [the] information is inaccurate, based on individual opinion rather than fact.
>
> Scientists' attitudes are influenced by the propensities of their employers.
>
> Scientists are too dogmatic, visionary and impractical in their discussion of ecological problems . . . [those] who are environmentalists are too emotional to provide the practical ideas needed.
>
> Many scientists currently giving public utterances [regarding protection of the environment] appear more interested in creating a sensation rather than giving objective analyses and suggestions for practical solutions.
>
> Scientists tend to extend their *expertise* in environmental matters into areas of politics and society which are beyond their competence.

There was also criticism of the peer approval system of science and a general feeling that scientists should be more vocal in public debate.

> Legal theories and opinions are constantly being validated [and invalidated] in courts; there appears to be no comparable activities by which scientific opinions on ecological problems may be weighed.
>
> There is an understandable but frustrating unwillingness to stake reputation when *risk* of harm becomes apparent, preferring more research.
>
> There is a concern about failure of scientists to publicly rebut unfounded assertions by politicians and pressure groups.

One significant barrier in communicating scientific information seemed to be the publication and distribution policies of scientific literature:

> The abundance or rather overabundance of scientific articles created under pressure of publish or perish creates a confusion of too many articles with too little content—a result thereof being none are read or the few significant articles are buried.
>
> Scientific writing and speaking is unnecessarily technical and assumes too much knowledge on part of general public.
>
> Scientific articles are difficult to understand and are not readily available to the general public.
>
> . . . both professions use jargon too much.

In the opinion of many of the respondents, scientists do not understand the role of the law or the nature of law in resolving societal problems.

> There is a general lack of understanding of the role of the law and lawyers on the part of environmental scientists. . . . They do not realize that the law is not an exact

> science and that you cannot put a legal problem into a computer and receive a precise answer.
>
> Many scientists have a basic and rather indefinable distrust of lawyers. . . . [P]articularly academicians tend to be intolerant of apparent obstacles which law and administrative process seem to place before . . . their ideas.

On the other hand, there was some, but much less, criticism of lawyers. Several of the respondents felt that blame for poor communications must be shared equally among the disciplines:

> . . . Only problems come when individuals are unwilling to take time and effort to learn to communicate. . . . Semantics is a problem.
>
> Both professions use jargon too much. . . . Lawyers write for lawyers, scientists write for other scientists. . . . scientists know more about law than lawyers know about science. . . . Lawyers should learn some science.
>
> There is not enough contact between scientists and attorneys.

Suggestions for improving communications favored interdisciplinary studies and ventures under the auspices of the legal and scientific associations:

> Joint studies of a scientific-legal nature . . . should be fostered. . . . Interdisciplinary study would help overcome communication problems.
>
> Communication can only be improved by a progressive program initiated by professional associations in both fields. . . . [The] legal profession could bring influential and representative members of the scientific community into their functions.
>
> There should be established within the ABA a law-science academy or institution to serve all sections of related organizations . . . that may share some interdependence on each other as a result of the developing problems of law and science that go hand in hand.
>
> Bibliographies, indexes, and glossaries are most difficult to find. . . . Scientific documents should be "paraphrased" not only for lawyers but also for other interested people—and vice versa.
>
> Co-authored articles in present journals . . . on which legal and scientific professions may co-operate [should be promoted].

Given the opinions that many of the respondents expressed about scientists and engineers, it is not surprising that there is a lack of effective communication among the professions. The commentary shows a serious credibility gap based on a perceived lack of veracity and objectivity on the part of scientists and engineers. This is contrary to what is considered to be the foundation of science.

Whether or not the impressions of the respondents are well founded is unimportant. That they exist at all is destructive of the communication process. Are scientists equally distrustful of lawyers? I fear they are and hope to test this hypothesis with a similar survey in the scientific community. Lawyers and scientists are unaccustomed to talking with one another. Their professional life styles have kept them apart, academically and in the commercial world. Often the only contact between the professions is through adversary proceedings. Within the corporate structure, a lawyer is cloistered in a legal division, and the only substantial contact others may have with him is in his role as counselor. Lawyers are seldom integrated into the research process.[5] The professional life styles must change if we are to overcome our communication problems.

Disciplines Need Translations

The legal profession has been negligent by failing to inform the general public, scientists included, of the nature of the legal process. Television programs about fictional lawyers have done more to acquaint the public with our legal system, albeit in a distorted manner, than has the legal profession. I have heard my scientist colleagues refer to *Time* and *Newsweek* as "law journals" because they are the only sources of understandable information available to nonlawyers. The results of this survey indicate a similar reliance on them by lawyers for scientific information. It is paradoxical that both professions must rely on third parties not skilled in either discipline to translate for the other.

If we are to improve communications, we must provide ways for lawyers and scientists to come together. Effective communication is learned and developed through personal contacts. In collaboration, the Association of American Law Schools and the American Association for the Advancement of Science sponsored joint sessions to discuss environmental problems at their 1970 national meetings in Chicago. These provide a useful prototype for similar symposia. Professional societies and associations must assume the leadership in developing interprofessional communications.

Institutions of higher education are recognizing the viability of the interdisciplinary approach and the value of establishing interdisciplinary curricula. Today's students seem to realize that satisfactory solutions to the most important problems facing society can only come from co-ordinating the resources of the natural sciences, behavioral sciences, and the law. Several innovative programs that integrate law and the sciences have been developed in universities.[6] Cornell's Science, Technology, and Society Program, the Center for Law and the Health Sciences at Boston University, the Science and Technology Program at George Washington Law School, and the Center for Science, Technology, and Public Policy at the University of Virginia are a few. *Ad hoc* student societies organized to deal with environmental and social problems also provide an extracurricular source for interdisciplinary experience.

New Support for Interprofessionalism

Research institutions and quasi-academic organizations have also shifted toward interdisciplinary programs. Oak Ridge National Laboratory has had a tradition of interdisciplinary approach to specific problems—interdisciplinary in the context of joint efforts among the natural sciences. This has been extended to include the behavioral sciences and social sciences as well. The National Science Foundation, the governmental organization responsible for funding and promoting scientific research, is encouraging the development of interdisciplinary and interprofessional programs in its supported research.

I believe that the scope and breadth of our social problems will force lawyers and scientists to learn to communicate more effectively. Now, we must speed up that learning process.

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The Process of Psychiatric Referral

Joseph R. Novello, M.D.

When I was in general practice, one of the most perplexing therapeutic tasks facing me was how to deal with the psychiatric components of my patients' illnesses. I recognized that virtually all organic illness, broadly speaking, is psychosomatic in that, sooner or later in the course of a physical illness, the patient's psychological reaction begins to play an increasingly important role. I was able to deal with such anticipated patient reactions to physical illness by being sensitive to the patient's needs, listening, offering empathic understanding and advice, suggesting various environmental manipulations, and sometimes prescribing tranquilizers or antidepressants. By and large, I was gratified with the results of such interventions. Although I am now in psychiatry, I still believe that the general medical physician can handle most of these cases himself.

My major problem as a GP, however, was how to deal with a different type of case: The case where the psychiatric aspect was primary, and was either causing a somatic symptom (such as a conversion reaction) or was so overwhelming that I was unable to treat the physical component adequately without first resolving the psychological aspects of the case.

Although I considered myself reasonably psychologically-minded, I recognized that, as a manner of training and time availability, I was not usually in a position to help these patients. In such cases I chose to refer them to a psychiatrist.

At the time, I felt that once I simply made the referral, I had done my job. Now, however, as a psychiatrist I suddenly find myself on the other end of the referral process and, believe me, I can now recognize that there is a lot more to referring a patient for psychiatric evaluation and treatment than met my eye when I was in General Practice. In fact, I have learned in case after case that psychiatric treatment of the patient really begins before the psychiatrist ever lays eyes on the patient; it begins back at the point where the general medical physician first tells the patient that he is recommending psychiatric referral. The manner in which this is done will, in a great many cases, actually determine whether or not the patient ever gets to the psychiatrist's office in the first place. In addition, *what* the referring physician says about sending his patient to a psychiatrist and *how* he says it, can have a profound impact on the whole future course of psychiatric treatment.

The following tips on how to refer patients to a psychiatrist will not guarantee a psychiatric cure in every case, but they will help insure that your patients will have a better chance of successful treatment.

Case Report

Your patient, Mrs. Smith, has been coming to you for several weeks complaining of abdominal pain. Extensive laboratory examination including upper G.I., barium enema, gall bladder series, IVP, stool examinations, blood chemistries, and other routine laboratory tests have all been entirely within normal limits. You have suspected from the history of symptom production in the face of stress, marital difficulty, secondary gain, and other psychosocial factors that Mrs. Smith's symptom was primarily psychological in its origins. Since Mrs. Smith seemed to balk at your early tentative "psychological" interpretation of her symptoms, you wisely backed off and proceeded with the complete medical workup. Now you have scheduled Mrs. Smith to come in to see you so that you can tell her of the results of all the tests. You have decided that you will refer Mrs. Smith for a psychiatric evaluation.

STEP-BY-STEP PSYCHIATRIC REFERRAL

1. End of the Line—There should be no reasonable doubt in your mind at this point that Mrs. Smith is going to be referred for psychiatric evaluation. You've reached the end of the medical line. There should be no turning back. Telling her to call a psychiatrist in one breath, and asking her to return next week for "one more test" in the next breath will not work. Mrs. Smith is probably skeptical about things psychiatric in the first place. Your own uncertainty will not help her.

2. Be Optimistic—You are *pleased* to be able to tell Mrs. Smith the work-up was negative. If you say, "I'm sorry Mrs. Smith, but I just couldn't find anything," you imply that something *is* there! (You were just too unskilled to find it.) Mrs. Smith will then either go to another physician or to the Medical Mecca in the next city to have all the same tests repeated, with the same results, Similarly, if you say, "Well, Mrs. Smith, there's nothing wrong with you," she'll either feel humiliated or she'll think you have her mixed up with another patient. She knows her pains are real. Yet, the objective findings are negative . . .

But, why apologize for negative findings? No, there are no abnormal findings, and you are *pleased* about it. You are pleased because the abdominal pain *could* have been due to some serious physical deficit, but, thank goodness, it is not.

DR. JOSEPH R. NOVELLO is associated with The Psychiatric Institute of Washington, 2141 K St., N.W., Washington, D.C. 20037.

3. Listen—Now you have reached *Resistance Point Number One.* Mrs. Smith probably was not prepared for this "good" news. She had been sure it was "something physical." However, before you launch into a long, intellectualized account of the principles of psychosomatic medicine—stop for a minute and listen.

Give Mrs. Smith a chance to respond at this point. Listen to her. Do not answer questions that she is not asking. She has probably thought about her troubles more than you have. If she says, "Yes, doctor, I've been thinking it could be due to my nerves . . .," you have your referral made. Given such a chance, it's surprising how many patients will actually say this to you.

But what about the rest? What if Mrs. Smith looks up blankly and says, "you mean it's all in my head?" or, "so I'm nuts, huh?"

4. Reassurance—No, you do not think she is making it all up, and she certainly is not "nuts." The symptom *is* there, and it must be bothering her quite a bit. You are saying that the pain is being caused by nerves, tension, emotional factors.

5. Educate—Most patients understand something about the mind-body concept. Others can be educated if it's explained in simple terms: "Mrs. Smith, have you ever been embarrassed? Did your face get red? That's an example of how your emotions have a direct effect on your body. Abdominal pain can also be caused by tension and emotion."

The patient, herself, might be able to supply other examples. "Tell me, Mrs. Smith, when you get nervous or tense, how do you *feel* inside? Those *feelings* are physical sensations, yet they were caused by your *emotional* reaction to something."

If you're going to refer the patient, now is the time. But wait a minute! Doctor, what are *your* feelings about referring Mrs. Smith to a psychiatrist? Whatever they are, you are about to communicate them to your patient, whether you know it or not.

You're queasy about it? Why? You feel Mrs. Smith will be *insulted* by a psychiatric referral? Why? Are you only too happy to get rid of all your "crocks?" What is it that makes *you* feel this way? Mrs. Smith will certainly pick up the cues.

Even the way you say (or don't say) "psychiatry" can be important. You are not referring Mrs. Smith to "a friend of mine whose office is in another building," or even "a specialist that deals with problems like yours." You are recommending a *psychiatrist.* If you imply "psychiatry" is a dirty word, Mrs. Smith is likely to think so too. (And if she comes to my office expecting to see your friend, the "specialist," she might just feel a bit "had" when she sees "Psychiatry" stamped across my door).

Your own reactions will rub off on Mrs. Smith and they can have a great effect on her future. It will help her not to be saddled by *your* uncertainties. Try to work them out.

Recommending a course of treatment about which you are in conflict is practically guaranteed to bring poor results. It is like prescribing a drug and saying, "Here, take these pills. I hear they work sometimes. I doubt it, but then, it's worth trying." Any self-respecting patient would flip them into the nearest wastebasket as soon as he was out of your office.

The psychiatric referral, like any other treatment recommendation, in order to have the best possible chance of success, should be made honestly, confidently and optimistically.

6. Listen Again to the Patient—You have told Mrs. Smith that her symptom is "psychosomatic" and that you would like to refer her to a psychiatrist. You have now reached *Resistance Point Number Two.* Before you hit her with the telephone number of the local psychiatric clinic, stop and listen to what she thinks about all of this. You might assume that Mrs. Smith will blindly follow your recommendations. Don't count on it. (As a fledgling GP, I thought that all of my patients followed *all* my instructions. I learned the hard way. They don't!) Ask Mrs. Smith what *she* thinks about your idea for psychiatric referral. Listen to her. If she is not sold, it will be pretty obvious.

Your job now is to hear her out, answer her questions, correct her misconceptions. A few minutes spent working through these resistances will go a long way toward ensuring the likelihood that Mrs. Smith will follow your advice, and that is ultimately what you want.

7. Don't Make Promises For The Psychiatrist—Mrs. Smith has finally said "O.K.," but now she has some legitimate questions about psychiatric treatment. "He'll keep me on those nerve pills, won't he? He won't want to see my husband too, will he? It won't take long, will it?"

The urge to quickly reassure her and move on to the next examining room may be great. Answers like, "Sure, he'll prescribe tranquilizers; no, your husband is not the patient; I'm sure he'll put you in short-term therapy," might sound good to *your* ears but, in the long run, they will not help Mrs. Smith and they may put your psychiatric consultant behind the therapeutic 8-ball before Mrs. Smith ever gets to his office.

Instead, you can say: "These questions that you're asking are important ones. Since they really involve you and the psychiatrist, I'm not in a position to answer them. But I think you should be sure to ask the psychiatrist about all these things when you first see him. Also, be sure to ask whatever other questions you might have. He'll want you to ask them and he will answer all of them as best he can."

Even the question of "how much will it cost" is usually best deferred. It would be useful to Mrs. Smith if you knew whether her insurance policy covered psychiatric consultation, and approximately how much the initial visit might cost, but beyond this, you might be treading on thin ice. Most psychiatric fees are adjustable depending on the precise type of treatment rendered, the patient's ability to pay, and other factors. The fee issue is an important part of the contract between patient and psychiatrist. Let them work it out. If Mrs. Smith cannot afford the customary fee, she may be accepted at a reduced rate. If not, the psychiatrist, on the basis of his initial evaluation, is in a good position to make a suitable agency-referral or other recommendation.

8. Help Make the Initial Contact—Now that Mrs. Smith agrees to follow your advice, your job is done, right? *Wrong*. You have simply reached *Resistance Point Number Three*. Only the most self-reliant, super-motivated patient will follow through on her own from this point. Mrs. Smith is going to need a little help. You will have to take a few more steps if you want to avoid referral-failure.

Assist Mrs. Smith in making her initial appointment. It helps if you can refer to one or more psychiatrists on a personal basis. Telling Mrs. Smith to "call Dr. Brown at 761-7742" or "Dr. Green at 761-8390" (and knowing that Brown or Green have time available) is worlds better than referring her to someone whose schedule is already too tight—or giving her a name and telling her to look it up in the yellow pages!

An alternative, of course, is to have your receptionist make the appointment *for* Mrs. Smith before she leaves your office.

9. Release of Information—Perhaps general medical physicians are stymied by the seeming hocus-pocus of psychiatric jargon but, for some reason, most of them fail to communicate their findings, impressions, and specific reasons for referral to their psychiatric consultant. This is too bad because it is the primary physician who usually knows the patient best. Forget the jargon. Tell the consultant, in your own language, why you're referring Mrs. Smith and what *you* think about her. The information is usually invaluable. Brown or Green will appreciate this consideration. You will gain points in "referralsmanship" and Mrs. Smith will also be better served by it.

10. Keep in Touch—Now that your patient is well on her way toward psychiatric consultation, it is important to let her know that you are not just trying to get rid of her. (The well-known "shunt-procedure.") Mrs. Smith is not a "crock." All of her future symptoms will *not* be psychiatric. She should feel free to come in to see you any time that she thinks she needs medical attention. You still value her as a person and you still consider yourself her physician.

That's it. You have done your work well and Mrs. Smith follows your recommendation.

At this point, I wish I could guarantee her future success in psychotherapy. I can't—but that is the psychiatrist's problem.

On the other hand, I *can* guarantee two things: *your* patient and *your* consultant will have a much better shot at therapeutic success, doctor, and all because of your empathetic and skillful technqiues in psychiatric referral.

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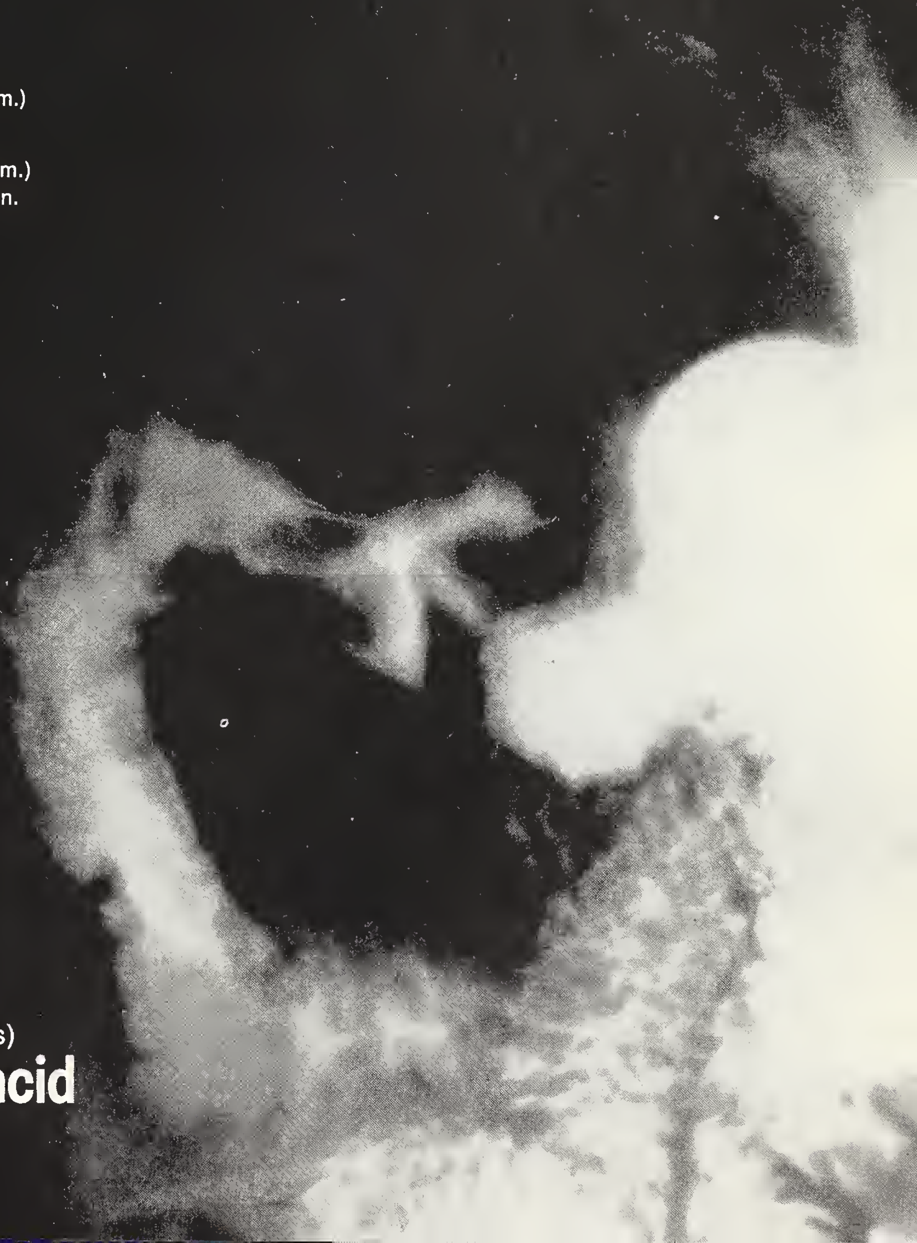

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Summary of Actions
Council Meeting
Thursday, October 24, 1974

I. Attendance

Present in addition to the Chairman, Dr. D. A. Grendon, and the Vice Chairman, Dr. C. W. Johnson, were: Drs. Root, Jr., VanSyckle, Backhus, Brandon, Gardner, Fabro, Bradley, Hess, Cramer, Granoff, Rubinow, Ragland, Jr., James, Freedman, Krinsky, Dambeck, Roch, Kamens, Canzonetti, Harkins, Magram, Mendillo, Eslami and Sonnen.

Also present were: Mrs. Lindquist, Mr. Tomat, Mr. Sweeney and Dr. Richards.

Absent were: Drs. Spitz, Nolan, Hecklau, McGarry, Sadowski, Barrett and Klare.

II. Routine Business

Approval of Minutes

As published and distributed, it was VOTED to approve the minutes of the meeting of September 11, 1974.

Life Memberships

It was VOTED to approve applications for Life Membership received from the following eligible Active Members:

Dana L. Blanchard, 687 Main Street, Branford.

E. Tremain Bradley, 31 Stevens Street, Norwalk.

Election of Student Members

It was VOTED to elect to Student Membership twenty-two Connecticut residents who are enrolled in schools of medicine and one graduate physician who is serving a residency in a Connecticut hospital. The names of those elected will be published in an early issue of the Journal.

Date of Next Meeting

The next Council meeting will be held on Wednesday, November 6, 1974.

III. Old, New and Special Business

Reports—Fiscal Subcommittee

It was VOTED to act on a series of reports filed by the Fiscal Subcommittee as follows:

(a) *Journal Readership Survey:* To receive as information the report of the F.S. that consideration of an allocation of $750 for a subject survey proposed by the Journal's Editorial Committee had been deferred until specimen copies of the survey questionnaire have been furnished to the members of the F.S. and of the Council.

(b) *Mailing of CME Booklet:* To approve the recommendation of the F.S. that up to $380.00 be allocated to the mailing costs of a 1975 Continuing Medical Education calendar booklet, which has been produced at the expense of the Aetna Life and Casualty and will be sent to the entire CSMS membership.

(c) *Wallet Card on VD Treatment:* To approve the recommendation of the F.S. that $150.00 be allocated to the printing costs of 7,000 such wallet-sized cards, bearing the logo of CSMS, which will be mailed by the State Health Department to *all* physicians licensed to practice in Connecticut.

(d) *Subscription to "PSRO Letter:"* To approve the recommendation of the F.S. that $150.00 be allocated to the "Subscriptions" line item of the Executive Director's Office budget to continue a subscription to the subject publication for another twelve month period. Published by McGraw-Hill, the "PSRO Letter" reports up-to-date developments on PSRO in Washington, D.C. (Office of PSR) and around the country. The F.S. also reported that Staff has been asked to abstract pertinent portions of the publication for distribution to members of the Council at appropriate intervals.

(e) *Nahum Award for Medical Writing:* To approve the recommendations of the F.S. that the subject Award Program be limited this year to medical students attending the Yale and UConn Schools plus Student Members of the Society, at an estimated cost of $350.00. A similar program for interns and residents serving in Connecticut hospitals (previously proposed) will not be implemented in 1975.

(f) *Purchase of Used Furniture:* To approve the recommendation of the F.S. that the expenditure of up to $450.00 be authorized with which to purchase a number of items of office equipment (plus moving costs) which it had come to the Society's attention could be obtained for 10% of original value.

(g) *Fencing for CSMS Premises:* To approve the recommendation of the F.S. that Staff be authorized to arrange for protective fencing to be installed on the headquarters building premises (to discourage and deter trespassing) at an estimated cost of up to $600.00.

Resignations, Appointments, Etc.

(a) *Committee on Legislation:* It was VOTED to accept the resignation of Albert S. Atwood, Torrington, as a member of the Committee. For the Litchfield Association to be represented on the Committee, as called for in the charge to the Committee, LCMA will be asked to name a replacement.

(b) *Cancer Coordinating Committee:* It was VOTED to accept the resignation of Robert A. Harwood, Brookfield, representing Danbury Hospital, as a member of the Committee. It was further VOTED to defer the naming of a replacement until nominations are made for committee appointments for 1975-76.

(c) *Editorial Committee of "Connecticut Medicine:"* It was VOTED to note the fact that Robert M. Lowman, New Haven, is no longer eligible to serve on the subject Committee due to his termination of CSMS membership.

Communications re CSMS-Aetna Professional Liability Program

It was VOTED to receive for filing three communications as follows: A letter from the Board of Trustees of the New London Association, commenting critically on the announced increases in premiums for the CSMS-Aetna Professional Liability Program; an informational report prepared by Staff which presented "facts and figures" about malpractice insurance nationwide, both as to availability and cost; and a resolution which is being transmitted to the House of Delegates on 11/20 by NHCMA which advocates that the concept of no-fault malpractice insurance be explored and reported on by the CSMS Committee on Professional Liability. After lengthy discussion of the foregoing communications and members' opinions re malpractice, two actions were taken as follows:

(a) It was VOTED to refer the three communications accepted for filing to the Committee on Professional Liability for study and report to the House of Delegates on November 20.

(b) It was VOTED to request the Committee on Professional Liability to make a study of all ramifications of malpractice and to develop a plan designed to deal with such ramifications which could lead to the enactment of legislation (federal and/or state) germane to the successful implementation of such a plan.

Remarks of the President

It was VOTED to receive as information the remarks of the President, James H. Root, Jr., Waterbury, concerning: (a) The current work of the Committee on Third Party Payments to develop informational materials pertaining to adequate benefits coverage under health insurance and prepayment plans, which will be submitted to the Council in the near future for approval and possible publication, and a proposal to award CSMS endorsement to carriers offering plans with approved coverages; and (b), a "health manpower" bill which is still under study by both the House of Representatives and the Senate which originally contained such objectionable provisions as federal licensure and relicensure every six years, federal regulation of specialization and regulation of residency training programs, etc. Subject to more changes that may be agreed upon in House-Senate conference, it appears that most of the objectionable provisions have been deleted from the original bill—largely through the legislative efforts of the AMA.

Reports—Medical Students Attending AMA Convention, Chicago, 6/74

It was VOTED to accept for filing the reports submitted by a Yale University medical student, Mr. Attilio V. Granata, and a UConn medical student, Mr. Joseph Rosenblatt, whose attendance at the recent AMA meeting in Chicago was made possible, in part, by CSMS subsidy of their transportation expenses. In addition to participating in the activities of the AMA House of Delegates and the "New England Delegation," both attended the Medical Students Business Session—an ongoing function established by AMA several years ago. It was further VOTED to send letters of thanks and commendation to the students for their respective reports and the excellence thereof, and to apprise them of the fact that their older, graduate peers are troubled by many of the same things that they found puzzling and frustrating and commented on in their reports.

Request for Representative—Yale Physician's Associate Program

It was VOTED to accept for filing a letter received from Robert J. Levine, M.D., Director of the subject program, in which Dr. Levine advises that an Advisory Committee to the Program is being formed and requests that the Society appoint a representative to serve on the Advisory Committee (he suggested that a member of the Society's Committee on Allied Medical Services would be especially welcomed). It was further VOTED to refer the request to Hilliard Spitz, New London, chairman of the Committee on Allied Medical Services, with the suggestion that he nominate a member of his Committee, if he deems such nomination advisable.

Communicatings re Medicaid "Screening, Diagnosis and Treatment Program"

It was VOTED to accept for filing a communication received from the Board of Governors of the New Haven County Medical Association which, in brief, requested that the Council "evaluate as to a possible role for CSMS in addressing the Welfare Department's desire for help (physician participation) from organized medicine in implementing HEW's "Early and Periodic Screening, Diagnosis and Treatment Program" for children eligible for Medicaid benefits. It was also VOTED to accept for filing a supplementary verbal report on this subject presented by Jerome K. Freedman, NHCMA Councilor, which suggested that inadequacy of Medicaid payments and a marked lag in paying Medicaid claims were probably major contributing factors to limitation of participation in the Program by physicians and dentists. Finally, it was VOTED to refer this matter (and the subject communications) to ths Liaison Committee with the State Welfare Department for discussion with the Commissioner of Welfare and his staff, and to inform the component County Medical Associations of this action and the reasons for same.

Communication from NHCMA re 1975 Annual Dinner

It was VOTED to accept for filing a letter received from the NHCMA Board of Governors which stated: (a) "that NHCMA would not accept responsibility" for purchasing a bloc of 16 tickets to the 1975 Annual Dinner, as "assessed" by the Council (7/17/74); and (b), that, without vote, the members of the Board "expressed regret at the discontinuance of free dinners" for members of the House of Delegates (the "Delegates Dinner" is to be abandoned and replaced by the "Annual Dinner" following adjournment of the meeting of the House).

Following prolonged discussion, three actions were taken as follows:

(a) It was VOTED to rescind the previous action which "assessed" the component County Association for the purchase of blocs of tickets to the 1975 Annual Dinner.

(2) It was VOTED to "urge" the component Associations to purchase blocs of tickets to the 1975 Annual Dinner on a voluntary (non-assessed) basis.

(3) It was VOTED to invite the members of the House of Delegates to attend the 1975 Annual Dinner without charge.

Communication re "FCMA Resolution," H. of D., 12/6/72

It was VOTED to accept for filing a letter received from Guy W. VanSyckle, Danbury, in which Dr. VanSyckle asks "what has been done" to implement the subject FCMA resolution which advocated the establishment and funding of a "Department on Government Relations" to advise the officers, the Councilors and the membership concerning tax-supported health care programs on a continuing basis; also copies of the subject resolution and of the subject report of the Committee on Statewide Planning to the House of Delegates on 4/30/74 which stated, in brief, that the intent of the FCMA resolution was being carried out by several committees of the Society and that the creation of a new committee (department) was felt *not* to be necessary at that time.

After a considerable period of general discussion, it was VOTED that a start be made to implement the subject FCMA resolution by the dissemination of pertinent information to the Council and to the membership, and that funds be appropriated for this purpose. It was further VOTED to request CSMS Staff to prepare and submit to the Council at its next meeting a plan to carry out the stated purpose, accompanied by "facts and figures" germane to such plan.

Informational Materials re "Health Planning"

It was VOTED to receive as information copies of two documents furnished by Orvan W. Hess, New Haven. The first of these was a published statement of New Haven Health Care, Inc., New Haven, a federally funded study and planning program, titled "Health Bill Priorities." The other was reproduced from the AMA publication titled "Legislative Roundup" and presented information concerning S.2994—"National Health Planning and Development and Health Facilities Assistance Act of 1974" which is soon to be reported out by the U.S. Senate Labor and Public Welfare Committee.

Request—Committee on Third Party Payments

It was VOTED to accept for filing a letter received from the chairman of the Committee on Third Party Payments, S. Pearce Browning, III, Norwich, in which he requested authorization from the Council to consult with CSMS legal counsel regarding insurance benefits for obstetrical care in relation to a recent ruling of the State Commission on Human Rights that maternity leave is to be considered as compensable as sick leave for any other cause. It was further VOTED to grant to Dr. Browning the authorization he requested.

Twenty-three student members were elected to the society.

STUDENT MEMBERS

John W. Andreoli, Jr., 97 Bretton Rd., Manchester, Conn.
University of Virginia—Class of 1977
Pre-Med: University of Rochester
Parent: John William Andreoli

Steven A. Belinkie, 335 Valley Rd., Fairfield, Conn.
New York University School of Medicine—Class of 1978
Pre-Med: Wesleyan University
Parent: Alfred R. Belinkie

Marianne Bette, R.D. No. 4, Southbury, Conn.
University of Southern California—Class of 1978
Pre-Med: Loyola University
Parent: Joseph A. Bette

James M. Burke, Jr., 64 Winthrop Rd., Manchester, Conn.
University of Rochester School of Medicine & Dentistry
Pre-Med: Dartmouth College
Parent: James M. Burke, Sr.

Alexander James Chalko, III, 475 Main St., Cromwell, Conn.
University of Virginia School of Medicine—Class of 1978
Pre-Med: Dartmouth College
Parent: Alexander James Chalko, Jr., M.D.

Jonathan T. Clarke, 30 Crescent Rd., Riverside, Conn.
McGill University Faculty of Medicine, Montreal, P.Q.,
Class of 1978
Pre-Med: Yale University
Parent: DeFrance Clarke

Michael Patrick Coppola, 857 Orange St., New Haven, Conn.
Georgetown University—Class of 1978
Pre-Med: Fordham College
Parent: William Francis Coppola (Deceased)

Wayne Lewis Creelman, 61 Grissom Dr., West Hartford, Conn.
Georgetown University—Class of 1978
Pre-Med: Boston College
Parent: Henry Lewis Creelman

William F. D'Angelo, 207 East St., Southington, Conn.
Tufts University School of Medicine—Class of 1978
Pre-Med: Holy Cross College
Parent: Eugene J. D'Angelo, M.D.

Robert Stephen Dienes, Jr., 20 Memory La., Fairfield, Conn.
Tufts University School of Medicine—Class of 1978
Pre-Med: Columbia University
Parent: Robert Stephen Dienes

Grahame W. Fitz, Pratt Island, Box 3452, Noroton, Conn.
Tulane University—Class of 1978
Pre-Med: Brown University
Parent: Reginald M. Fitz, M.D.

Michael Jeffrey Greenberg, 45 Alderwood Dr.,
West Hartford, Conn.
Medical College of Wisconsin—Class of 1978
Pre-Med: University of Connecticut
Parent: Max J. Greenberg

Deborah Anne Greenman, Ridgewood Dr., Woodstock, Conn.
Tufts Medical School—Class of 1978
Pre-Med: Yale University
Parent: Norman L. Greenman

Bernard Andrew Macik, Jr., 20 Croydon Ct., Wallingford, Conn.
University of Virginia—Class of 1978
Pre-Med: Yale University
Parent: Bernard A. Macik, Sr.

Lorraine Bernice MacLean, 309 Forest Ridge Rd.,
Waterbury, Conn.
Georgetown University—Class of 1978
Pre-Med: Harvard University
Parent: Donald MacLean

Letha Elaine Mills, 1 Yankee Hill Rd., Westport, Conn.
Dartmouth Medical School—Class of 1977
Pre-Med: University of Pennsylvania
Parent: Clifford W. Mills, M.D.

Kenneth David Polivy, 44 Ferncliff Dr., West Hartford, Conn.
Tufts University—Class of 1978
Pre-Med: Brown University
Parent: Charles Polivy, M.D.

John S. Rubin, 60 Lawler Rd., West Hartford, Conn.
New York Medical College—Class of 1977
Pre-Med: Dartmouth College
Parent: Saul Rubin

Kurt D. Schlichting, 14 Wesley Rd., Broad Brook, Conn.
New York Medical College—Class of 1977
Pre-Med: Hofstra University
Parent: Donald R. Schlichting

Ronald Lawrence Silver, 344 Autumn Ridge Rd.,
Fairfield, Conn.
Northwestern University Medical School—Class of 1978
Pre-Med: Northwestern University
Parent: Robert Silver

Robert Stanton, 105 Alden Ave., New Haven, Conn.
Columbia P & S—Class of 1972
Resident: Yale-New Haven 1977
Parent: Jay Stanton, M.D.

Greg Alan VanDerwerker, 1018-B Heritage Village,
Southbury, Conn.
Emory University School of Medicine—Class of 1977
Pre-Med: University of Vermont
Parent: Earl E. VanDerwerker, Jr., M.D.

Mark Andrew Wohlgemuth, 136 Leffingwell Ave.,
Waterbury, Conn.
University of Rochester—Class of 1978
Pre-Med: Tufts University
Parent: Paul R. Wohlgemuth, M.D.

Is He a Source of Information?

Yes, with certain reservations. The average sales representative has a great fund of information about the drug products he is responsible for. He is usually able to answer most questions fully and intelligently. He can also supply reprints of articles that contain a great deal of information. Here, too, I exercise some caution. I usually accept most of the statements and opinions that I find in the papers and studies which come from the larger teaching facilities. It goes without saying that a physician should also rely on other sources for his information on pharmacology.

Training of Sales Representatives

Ideally, a candidate for the position as a sales representative of a pharmaceutical company should be a graduate pharmacist who has a questioning mind. I don't think this is possible in every case, and so it becomes the responsibility of the pharmaceutical company to train these individuals comprehensively. It is of very great importance that the detail man's knowledge of the product he represents be constantly reviewed as well as updated. This phase of the sales representative's education should be a major responsibility of the medical department of the pharmaceutical company.

I am certain that most of these companies take special care to give their detail men a great deal of information about the products they produce—information about indications, contraindications, side effects and precautions. Yet, although most of the detail men are well informed, some, unfortunately, are not. It might be helpful if sales representatives were reassessed every few years to determine whether or not they are able to fulfill their important function. Incidentally, I feel the same way about periodic assessments of everyone in the health care field, whether they be general practitioners, surgeons or salesmen.

Value of Sampling

I personally am in favor of limited sampling. I do not use sampling in order to perform clinical testing of a drug. I feel that drug testing should rightly be left to the pharmacology researcher and to the large teaching institutions where such testing can be done in a controlled environment.

I do not use samples as a "starter dose" for my patients. I do, however, find samples of drugs to be of value in that they permit me to see what the particular medication looks like. I get to see the various forms of the particular medication at first hand, and if it is in a liquid form I take the time to taste it. In that way I am able to give my patients more complete information about the particular medications that I prescribe for them.

capacity they are indeed useful; particularly in the fact that they disseminate broadly based educational material and serve not just as "pushers" of their drugs.

The Other Side of the Coin

Obviously, the pharmaceutical companies are not producing all this material as a labor of love—they are in the business of selling products for profit. In this regard the ambitious and improperly motivated sales representative can exert a negative influence on the practicing physician, both by presenting a one-sided picture of his product, and by encouraging the practitioner to depend too heavily on drugs for his total therapy. In these ways, the salesman has often distorted objective reality and undermined his potential role as an educator.

The Industry Responsibility

Since the detail man must be an information resource as well as a representative of his particular pharmaceutical company, he should be carefully selected and thoroughly trained. That training, perforce, must be an ongoing one. There must be a continuing battle within and with the pharmaceutical industry for high quality not only in the selection and training of its sales representatives, but also in the development of all of its promotional and educational material.

The industry must be ready to accept constructive as well as corrective criticism from experts in the field and consumer spokesmen, and be willing to accept independent peer review. The better educated and prepared the salesman is, the more medically accurate his materials, the better off the pharmaceutical industry, health professionals and the public—*i.e.*, the patients—will be.

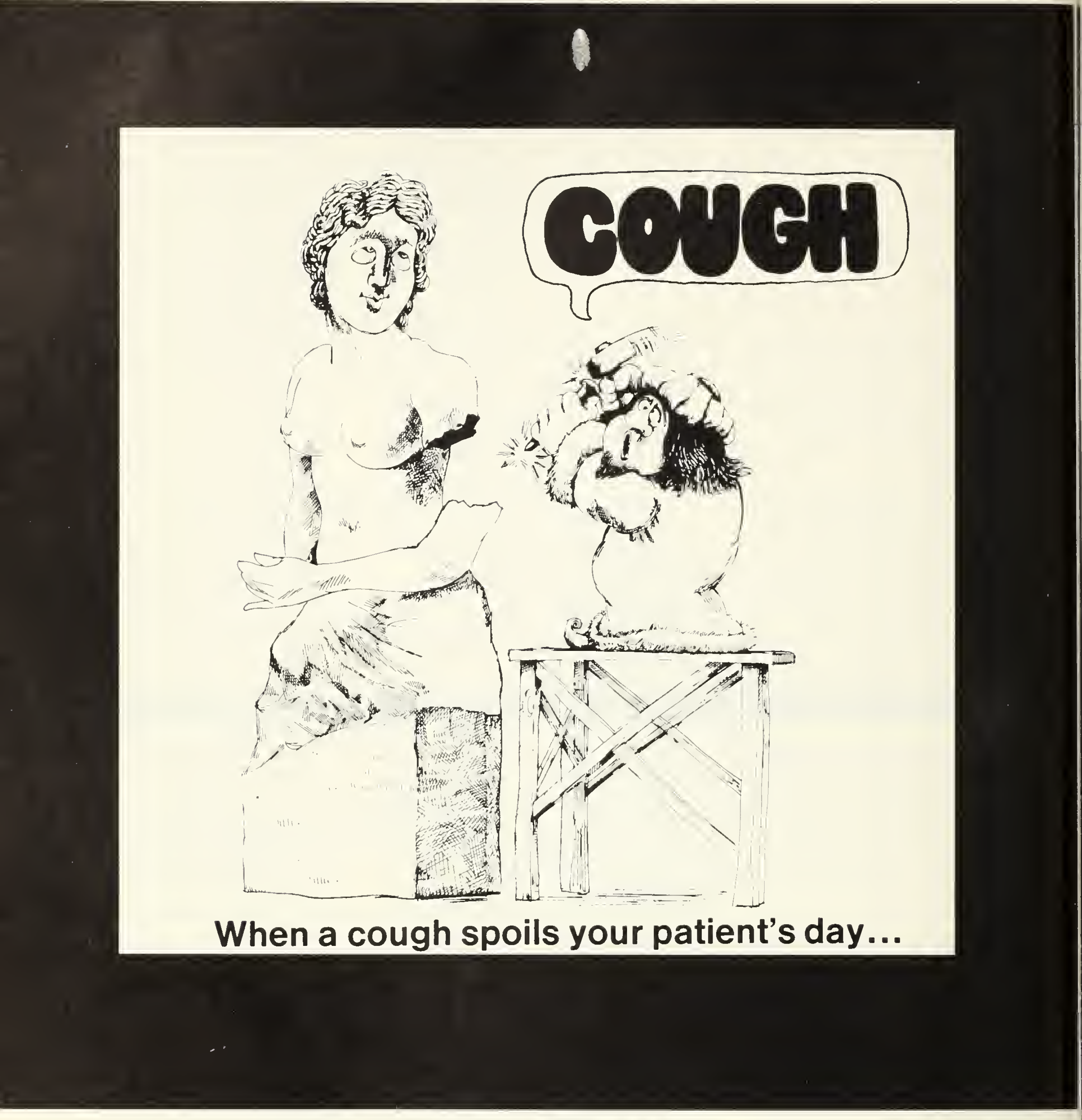
Physician Responsibility

The practicing physician is in constant need of up-dated information on therapeutics, including drugs. He should and does make use of drug information and answers to specific questions supplied by the pharmaceutical representative. However, that information must not be his main source of continuing education. The practitioner must keep up with what is current by making use of scientific journals, refresher courses, and information received at scientific meetings.

The practicing physician not only has the right, but has the responsibility to demand that the pharmaceutical company and its representatives supply a high level of valid and useful information. I feel certain that if such a high level is demanded by the physician as well as the public, this demand will be met by an alert and concerned pharmaceutical industry.

From my experience, my impression is that sectors of the pharmaceutical industry are indeed ethical. I challenge the industry as a whole to live up to that word in its finest sense.

Pharmaceutical
Manufacturers Association
1155 Fifteenth Street, N.W.
Washington, D.C. 20005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When a cough spoils your patient's day...

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Each teaspoonful (5 ml.) contains:
Triaminic, 25 mg. (phenylpropanolamine hydrochloride, 12.5 mg.; pheniramine maleate, 6.25 mg.; pyrilamine maleate, 6.25 mg.); glyceryl guaiacolate, 100 mg.; alcohol, 5%.

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Each teaspoonful (5 ml.) contains:
Codeine phosphate, 10 mg. (Warning: May be habit forming); Triaminic, 25 mg. (phenylpropanolamine hydrochloride, 12.5 mg pheniramine maleate, 6.25 mg.; pyrilamine maleate, 6.25 mg.) glyceryl guaiacolate, 100 mg.; alcohol, 5%.
Triaminic Expectorant with Codeine is a Schedule V controlled substanc

The Adult Expectorants that are great for kids, too.

Dorsey Laboratories/Division of Sandoz-Wander, Inc./Lincoln, Nebraska 68501

B--R

PHYSICIAN PLACEMENT SERVICE

The Society maintains the Physician Placement Service as a service to the medical profession in the State of Connecticut. Opportunities for physicians to locate in Connecticut will be published as space permits and will be distributed to physicians making inquiry of such opportunities. Information should be sent to 160 St. Ronan Street, New Haven, Connecticut 06511, (203-865-6822).

Physicians wishing to establish practice in Connecticut are invited to submit a resume to be kept on file with the Society. An announcement of a physician's availability will be published in two consecutive issues of *Connecticut Medicine.*

OPPORTUNITIES FOR PRACTICE

(If no name is listed, contact the Physician Placement Service for more details.)

Allied Health

Graduate with B.S. degree in Health Services Administration; desires administrative post with group or health care organization. Also certified inhalation therapist.

Physician's Assistant: Desires location in small community in group practice or clinic. Graduate of U.S. Public Health's P.A. program. 25 years of age. 3 yrs. in Navy. Steven Brandes, 165 Seneca Avenue, Staten Island, New York 10301.

Physician's Assistant: Presently enrolled in AMA approved P.A. program at the Cleveland Clinic Foundation—Cuyanoga Community College. Available in June. Desires rural community. 24 years old. 4 years as USN hospital corpsman. James A. Deyling, 10456 Manorfold Drive, Parma Heights, Ohio 44130.

Physician's Assistant: 25 years old. U.S. Public P.A. Training Program. Also radiological technician. Presently available. Joseph A. Cardello, 273 Heberton Avenue, Staten Island, New York 10302.

Allergy: Position available with group in Greater Hartford area.

Ophthalmology: Active practice will become available in the spring of 1975. Greater New Haven area.

Internal Medicine

Primary physicians being sought for Central Connecticut community. 300 bed hospital. 100,000 population. Adjacent to Greater Hartford area. Contact C. W. Wickersham, M.D., Chairman, Search Committee, 44 Haynes Street, Manchester, Connecticut.

Northeastern Connecticut in search of internists. Area needs coverage.

Northwestern Connecticut: Need for primary care physicians. Several contacts.

Two internists want a third for family care type practice. Mostly ambulatory care. Attractive community. Conveniently located in SW part of state.

Internist (not GI or Cardiology) to join young M.D. in busy practice. Conveniently located, small community hospital. Excellent opportunity.

Third internist needed for busy practice. 300 bed hospital. Community offers many advantages for family activities. Few minutes from Hartford.

Internist needed for life insurance company. Contact Access Group, 111 Pearl Street, Hartford, 527-0107.

Three man internal medicine group looking for fourth. Fairfield County. Many advantages. Phone 255-3441 for details.

Associate wanted for established solo practice in family internal medicine. C. A. Crown, M.D., 194 South Avenue, New Canaan, Connecticut 06840.

Emergency Room

New Milford Hospital, New Milford, Conn. 06776, (203) 354-5531. Full-time position; 90 bed acute care hospital. Rural setting near urban centers. Contact Administrator.

Central Connecticut. Full-time position. Arthur V. McDowell M.D., Middlesex Memorial Hospital, 28 Crescent Street, Middletown, Connecticut 06457.

Family Practice

Attractive shore community. Physician retiring. Community hospital. Few minutes from New Haven. Office space available. Need for primary physicians.

Northeastern section of state needs primary care physician. Community assistance to establish practice. Several opportunities.

Private, solo practice. New hospital. Need for physician in growing section of state.

Group of two internists in suburban Fairfield County. Excellent opportunity. Salary. Community needs additional coverage.

Family Practice Group seeking young physician to join active group. Will consider internist.

Family practice in Litchfield County. Opportunities in group or in solo practice. Coverage available, if solo. Contact: James F. McKenna, M.D., 379 Prospect Street, Torrington, Ct. Tel.: (482-6513).

New Milford Area: Two additional family practitioners needed. Night coverage, office space and financial assistance available. Morris S. Clark, M.D., 21 Elm Street, New Milford, Connecticut. Tel.: (865-7318).

Enfield-Somers-Stafford Springs: New 75 bed, general hospital to be completed by summer of 1975. Additional primary physicians needed. Edward A. Palomba, M.D., 535 Hazard Avenue, Enfield, Connecticut. (Tel.: 749-8384).

Southington: Small community hospital. Conveniently located in Central Connecticut. Take over a practice with help. Contact: R.E. Thalberg, M.D., 80 Oakland Road, Southington, Connecticut. (Tel.: 628-0808).

Willimantic: Solo with coverage and initial support from physicians presently in practice. Community hospital with extensive services. Contact: George E. Roch, M.D., 132 Mansfield Avenue, Willimantic, Connecticut. 06226 (Tel.: 423-9764)

Private practice of general medicine: Community needs additional coverage. Contact: J.L. Abbott, M.D., 106 Litchfield Street, Torrington, Ct. 06790 (Tel.: 489-8655).

Primary care (family practice and/or internal medicine). 82 bed community hospital with new ICU. Competitive first year subsidy. Association with established physicians possible. Contact Richard S. Dutton, M.D., Winsted Memorial Hospital, Winsted, Connecticut 06098 (Tel.: 379-0711).

General Medicine

FP or IM. Some student health. No OB or major surgery. Urban setting in central part of the state. Several hospitals.

(continued)

Coastal community near Rhode Island seeks primary care physician.

Central Connecticut community with small hospital. Physician in search of associate. Active family practice.

Primary Care: Family Physicians, Pediatrician, Internists—all needed in growing area of western Connecticut. Contact Administrator, New Milford Hospital, New Milford, Conn.

Family Practice Group: Two physicians need a third. Very active summer population in coastal community. Attractive location between New Haven and New London.

Community leaders in search of physician to serve 12,000 to 15,000 people. Fairfield County.

Northwestern corner of the state has opportunities for several physicians. Office space available. Physicians in area will assist.

Primary Care Multispecialty Group: Central Connecticut. Servicing two areas. Two hospitals.

PHYSICIANS WISHING TO LOCATE IN CONNECTICUT

(If no name is listed, contact the Physicians Placement Service)

Internal Medicine: Endocrinology; available summer of 1975. 32 years old. Presently at Duke University Medical Center. Desires IM with 50% endocrinology and metabolism. Harvey K. Bucholtz, M.D., 2705 Sarah Avenue, Durham, North Carolina 27707.

Internal Medicine: Hematology: Available July 1975. On active duty with U.S. Army. Board certified. Graduate of Albany Medical College. 32 years old. Peter T. Burkart, M.D., 5714-A Brown Avenue, Fort Knox, Kentucky 40121.

Internal Medicine: Certified in IM in 1972; GI in 1973. 31 years old. Presently in U.S.A.F. Prefers group practice. Available in 1975. Michael Grossman, M.D., 5029 Ryan Drive, Oklahoma City, Oklahoma 73135.

Internal Medicine: Board eligible. Presently resident at Bellevue Hospital, N.Y.C., 26 years old. Available July 1975. Alan Klein, M.D., Apt. 11 E, 343 East 30th Street, N.Y.C. 10016.

Internal Medicine: Gastroenterology: Available July 1975. Board certified. Presently Fellow at NYU School of Medicine. 28 years old. Contact CSMS—IK.

Internal Medicine: Wishes group practice. Completing residency at University of Cincinnati Medical Center. 28 years old. Board eligible. Thomas E. Lindow, M.D., 4886 Hawaiian Terrace, Cincinnati, Ohio 45223.

Internal Medicine and Rheumatology: Available January 1975. Connecticut License. Took ABIM in June 1974. Canadian trained. 34 years old. Married. Presently in practice. Write AM MD c/o CSMS.

Internal Medicine: Pulmonary Diseases: Desires hospital based, inhalation therapy with fiberoptic bronchoscopy facilities. Board certified. Presently in U.S. Army. Group or associate practice. John D. O'Brien, M.D., 5602 B. Gilkey Street, Fort Know, Kentucky 40121.

Cardiology: Board eligible. 34 years old. Prefers cardiology practice with catheterization facilities. Associate or institutional practice will be considered. Columbia and Michigan trained. Daniel S. Raabe, Jr., M.D., 1614 Dexter Road, Ann Arbor, Michigan 48103.

Cardiology: Certified in IM. Eligible in Cardiology. Group, associate or institutional practice desired. Michigan and University of Rochester trained. 31 years old. Available Summer of 1975. Jerald A. Young, M.D., 5719 Gomer Pyle, San Antonio, Texas 78240.

Internal Medicine: Hematology—Oncology. Board certified. Group or associate type practice. National Board Diplomate. Jefferson Medical College, Duke Medical Center and National Cancer Institute Fellowship. Desires internal medicine with Oncology. Age 29. Available 7/75. A. J. Schwartz, III, M.D., 14163 Castle Blvd., No. 403, Silver Spring, Maryland 20904.

Internal Medicine: Group practice desired in area near New Haven or in Fairfield County. Board Eligible. Age 32. Connecticut license. Yale Medical and residency at University of Michigan. Available late summer of 1975. Alan G. Finesilver, M.D., 616 Peninsula Ct., Ann Arbor, Michigan 48105.

Internal Medicine—Nephrology: Group or Associate practice. Board certified. Available July 1975. Presently Fellow in Nephrology at the Jersey City Medical Center. Interned in Meriden—Wallingford. G. A. Lipat, M.D., 255 Berkeley Avenue, No. 1A, Newark, New Jersey 07107.

Internal Medicine—Oncology: Private or Institutional Practice. Age 32. Available 7/75. Board eligible. Resident at Norwalk Hospital in 1972. Presently at Anderson Hospital in Houston. Hui-Yen Chang, M.D., 9707 Timberside No. 8, Houston, Texas 77025.

Internal Medicine: Connecticut license. Available June 1975. FLEX. Age 33. Resident at St. Mary's Hospital in Waterbury. Hospital or private practice. Haren P. Desai, M.D., St. Mary's Hospital, Waterbury, Conn.

Internal Medicine: Insurance or Administrative position. Available with reasonable notice. Age 43 years old. Board eligible. Presently in practice. Tufts and Boston City Hospital. Arthur J. Rubin, M.D., 185 Cedar Lane, Teaneck, New Jersey 07666.

Internal Medicine: General Medicine with some G.I. cases. Group or associate practice. Medium sized community desired. Available July 1975. Bilingual: Spanish, 37 years old. Presently Fellow at V.A. Hospital. Luis A. Tupac, M.D., 7142 Salem Drive, New Orleans, Louisiana 70127.

Internal Medicine: Ambulatory care. Group or institutional practice. Medium or small community desired. Princeton, Columbia P and S. Age 39. Presently in practice. Mayer R. Lightdale, M.D., 22 Robinson Street, Cambridge, Mass. 02138.

Orthopaedic Surgery: Group or Associate practice. On priority list for U.S.A. Visa. Robert K. Ellis, M.D., 404 Griffin Street, London, Ontario, Canada.

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Connecticut Medicine

The 1974 Roster

of the

CONNECTICUT STATE MEDICAL SOCIETY

FOUNDED IN 1792

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Woman's Auxiliary

The Officers, Committees and Members

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- Poison Control Centers

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FOUNDED IN 1792

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CSMS MEMBERSHIP

An exact statement of membership requirements appears in the Bylaws of the Connecticut State Medical Society.

Active Members:

Active membership shall be limited to those members of component associations who are certified to the Executive Director of The Society as entitled to exercise all rights of membership in their component associations including the rights to vote and hold office. A physician eligible for active membership in The Society becomes an active member of The Society upon receipt by The Society of annual dues, which are established annually by the House of Delegates.

Associate Members:

Individuals interested in the science of medicine and public health, but are not licensed to practice medicine in the State of Connecticut may apply for associate membership in The Society. Once elected, an associate member may attend meetings, serve on committees, present papers before The Society, but may not vote or hold elective office.

Honorary Members:

Eminent physicians may be made honorary members by a majority vote of the House of Delegates. Honorary members may not vote or hold office and are not expected to pay dues.

Life Members:

Any member of The Society who has been an active member of The Society or of the American Medical Association for thirty-five consecutive years or who has reached his sixty-fifth birthday anniversary and has been an active member of The Society or of the American Medical Association for fifteen or more years, or any active member of The Society who becomes totally and permanently disabled shall be eligible for life membership. A physician eligible for life membership may apply for such membership to the Executive Director of The Society and shall become a life member on approval by the Council. Life members shall not be subject to dues or assessments but shall be accorded all the rights and privileges of active membership in The Society including the rights to vote and hold office.
Exemption from payment of dues for Life Members shall become effective on January 1 of the year following the thirty-fifth year of membership or of the anniversary year of their sixty-fifth birthday, whichever is applicable.

Student Members:

Any bona fide medical student in the State of Connecticut or any Connecticut resident attending an out of state medical school may become a student member of The Society. Interns and residents, not licensed to practice, in hospitals in Connecticut may obtain student membership. Student members file special applications for membership to the Council. Student members may not vote or hold office and are not required to pay dues.

Members who become inactive or are expelled or suspended from a county association will be placed in the same category with The Society.

THE HOUSE OF DELEGATES

Powers and Duties:

The House of Delegates is the ultimate legislative and policy-making body of the Society and assumes primary responsibility for the management of the affairs of the Society. As such, it elects the Society's officers, boards and committees, formulates the bylaws, approves budgets and assesses membership dues.

Composition:

The membership of the House consists of the delegates elected by the component county medical associations (one delegate for each thirty-five members or fraction thereof), the members of the Council, and the past presidents of the Society, ex-officio and without vote. All members of the House must have been members of the Society for at least two years immediately prior to being seated.

Meetings:

The House of Delegates holds two regular meetings each year, one in the fall and one in the spring. Special meetings of the House may be called by the Speaker on written requests of twenty-five or more delegates or by a majority of the voting members of the Council. At special meetings, no business other than that stipulated in the call for the meeting may be considered. Meetings of the House of Delegates are open to all members who wish to attend as observers.

Introduction of Resolutions:

Resolutions for consideration by the House may be submitted by any member of the Society. Resolutions must be in the hands of the Speaker not later than 72 hours prior to the convening of the House in order to be considered as regular business. Resolutions presented later than the 72 hour deadline may be considered if accepted by a majority vote of the House.

Referendum:

A referendum on any issue may be conducted among the members of the Society, if approved by a two-thirds vote of the delegates. The majority vote of those members responding to the referendum shall determine the question and be binding on the House of Delegates.

THE COUNCIL

Powers and Duties:

The Council is granted by the House of Delegates all powers necessary to act as the executive and administrative body of the Society while the House is not in session.

Composition:

The Council consists of the general officers of the Society, any member who is serving as a general officer of the American Medical Association, and the Councilors and Associate Councilors elected by the component county medical associations.

Meetings:

Under normal circumstances the Council meets at monthly intervals throughout the year. On occasion, the Council may hold additional meetings for the purpose of considering, or completing action on, matters of special importance. Meetings other than those scheduled by consent of the Council may be called by the Chairman or upon petition of three members of the Council.

Procedure:

As with the House of Delegates, any member of the Society or any group of members may submit matters to the Council for consideration. Such communications are to be addressed in writing to the Chairman of the Council care of the Society's headquarters, 160 St. Ronan Street, New Haven, and will be placed on the agenda of the earliest meeting possible following receipt. In most instances, the decision of the Council is equivalent to a decision by the House of Delegates. However, in certain instances, the Council may elect to transmit the matter, with recommendations, to the House of Delegates for final disposition.

MEDICAL ETHICS

The Bylaws of the Connecticut State Medical Society state that "the Principles of Medical Ethics of American Medical Association shall govern the conduct of members in their relations to each other and to the public".

PREAMBLE: These principles are intended to aid physicians individually and collectively in maintaining a high level of ethical conduct. They are not laws but standards by which a physician may determine the propriety of his conduct in his relationship with patients, with colleagues, with members of allied professions, and with the public.

Section 1: The principal objective of the medical profession is to render service to humanity with full respect for the dignity of man. Physicians should merit the confidence of patients entrusted to their care, rendering to each a full measure of service and devotion.

Section 2: Physicians should strive continually to improve medical knowledge and skill, and should make available to their patients and colleagues the benefits of their professional attainments.

Section 3: A physician should practice a method of healing founded on a scientific basis; and he should not voluntarily associate professionally with anyone who violates this principle.

Section 4: The medical profession should safeguard the public and itself against physicians deficient in moral character or professional competence. Physicians should observe all laws, uphold the dignity and honor of the profession and accept its self-imposed disciplines. They should expose, without hesitation, illegal or unethical conduct of fellow members of the profession.

Section 5: A physician may choose whom he will serve. In an emergency, however, he should render service to the best of his ability. Having undertaken the care of a patient, he may not neglect him; and unless he has been discharged he may discontinue his services only after giving adequate notice. He should not solicit patients.

Section 6: A physician should not dispose of his services under terms or conditions which tend to interfere with or impair the free and complete exercise of his medical judgment and skill or tend to cause a deterioration of the quality of medical care.

Section 7: In the practice of medicine a physician should limit the source of his professional income to medical services actually rendered by him, or under his supervision, to his patients. His fee should be commensurate with the services rendered and the patient's ability to pay. He should neither pay nor receive a commission for referral of patients. Drugs, remedies or appliances may be dispensed or supplied by the physician provided it is in the best interests of the patient.

Section 8: A physician should seek consultation upon request; in doubtful or difficult cases; or whenever it appears that the quality of medical service may be enhanced thereby.

Section 9: A physician may not reveal the confidences entrusted to him in the course of medical attendance, or the deficiencies he may observe in the character of patients, unless he is required to do so by law or unless it becomes necessary in order to protect the welfare of the individual or of the community.

Section 10: The honored ideals of the medical profession imply that the responsibilities of the physician extend not only to the individual, but also to society where these responsibilities deserve his interest and participation in activities which have the purpose of improving both the health and the well-being of the individual and the community.

ANNUAL RENEWAL OF MEDICAL LICENSES

Section 19-45 (b) of the Connecticut statutes requires renewal of medical licenses annually during the month of January. An IBM application is sent at the end of December. The registration fee is $150.00. There is no pro-rating.

No fee is required of practitioners residing and practicing outside of Connecticut, in military service, or retired, but there is no exemption for anyone from the registration requirement. Everyone must register. The penalty for failure to renew is $100.00.

Registration is handled through the State Department of Health, 79 Elm Street, Hartford, Connecticut 06115.

CHANGE OF ADDRESS

Practitioners are required to report to the State Department of Health within thirty days any change of address for his or her office and/or residence. (Section 19-46)

DIRECTORY OF KEY NAMES AND ADDRESSES FOR THE STATE DEPARTMENT OF HEALTH

Connecticut State Department of Health
79 Elm Street
Hartford, Connecticut 06115

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AVAILABLE LABORATORY SERVICES

Free laboratory tests are provided by the Connecticut State Department of Health for the diagnosis and control of the following preventable diseases:

Anthrax—Cultures for anthrax bacilli.

Brucellosis (undulant fever)—Agglutination tests; cultures.

Diphtheria—Cultures; virulence tests.

Enteric Bacillary Infections—Stool examinations for Salmonella, Shigella and Enteropathogenic E. Coli.

Food Infections and Food Poisoning—Tests for causative organism, including salmonellae, staphylococci and Clostridium perfrigens; tests for botulism toxin.

Gonorrhea—Pus smears and cultures.

Infectious Mononucleosis—Serologic tests.

Lead Poisoning—Blood specimens for lead determinations. Urine specimens for ALA determinations.

Leptospirosis—Serologic tests; cultures by arrangement.

Malaria—Blood smears; Serological tests.

Mycoses or Fungus Infections—Microscopic, cultural, and serologic examinations for pathogenic molds and yeasts.

Parasitic Diseases—Stool examinations for amebae, other protozoa and helminths; vaginal smears for trichomonads; serologic tests; anal swabbings for pinworms.

Rabies—Animal brains for rabies virus.

Rickettsial Infections—Serologic tests on paired blood serums.

Staphylococcal Infections—For epidemiological investigations by bacteriophage typing of isolants.

Streptococcal Infections—Throat cultures; serologic grouping; streptococcal antibody tests.

Syphilis—VDRL flocculation tests; FTA—ABS tests; darkfield examinations.

Tuberculosis—Microscopic, cultural, biochemical tests, and antibiotic sensitivity tests.

Tularemia—Agglutination tests; cultures.

Typhoid and Other Salmonella Infections—Agglutination tests; cultural tests on blood, feces and urine.

Vincent's Infection—Pus smears.

Viral Infections—Serologic tests on paired blood specimens; cultural tests.

SEND ALL SPECIMENS TO LABORATORY DIVISION, STATE DEPARTMENT OF HEALTH
P.O. Box 1689, HARTFORD, CONNECTICUT 06101

Containers for forwarding specimens can be obtained from local directors of health or directly from Laboratory Division

10 Clinton St., Hartford, Conn. 06101 TEL: 566-2536, 566-3971

Other special cultural and serological tests may be available. Direct inquiries to:

566-5723 (Bacteriology) or 566-4774 (Virology).

MEDICAL ASSISTANCE PROGRAM

Through the Connecticut State Welfare Department, special provisions may be made to assist with payment of medical care for:

1. Beneficiaries of money payments under the Old Age Assistance, Aid to the Blind, Aid to the Disabled and Aid to Families with Dependent Children programs;
2. Children committed to the State Welfare Commissioner;
3. Children under 18 who are members of a family receiving basic maintenance under the General Assistance program;
4. Medically needy persons who meet all the eligibility requirements of OAA, AB, AD or AFCD, except that income and resources are sufficient to meet basic maintenance needs.
5. Medically needy children under 18 not included in any welfare maintenance program.

These programs are administered through the sub-offices of the State Welfare Department. Physicians are advised to contact the nearest office:

Hartford	2550 Main Street	566-5900	Stamford	1642 Bedford Street	348-9245
New Haven	194 Bassett Street	787-6181	Manchester	Suite 205, 364 West Middle Tpke.	647-1441
Bridgeport	434 State Street	384-1761			
Norwich	279 Main Street	889-2351	Danbury	405 Main Street	744-2494
Torrington	352 Main Street	482-5531	New Britain	233 Main Street	224-2601
Waterbury	79 Linden Street	578-1211	Meriden	139 Charles Street	238-1991
Middletown	117 Main Street Ext.	347-4411	Bristol	308 Main Street	583-1671

DEPARTMENT OF MENTAL HEALTH

Physicians may obtain detailed descriptions of the various programs sponsored for the care of the mentally ill by contacting the State Department of Mental Health, 90 Washington Street, Hartford, Connecticut. Telephone 566-3679 or 566-5270.

Department of Mental Health Facilities

Albany Avenue Child Guidance Center
620 Albany Ave.
Hartford, Conn. 06112
Phone: 566-2436

Blue Hills Hospital
51 Coventry Street
Hartford, Conn. 06112
Phone: 566-4404

Conn. Mental Health Center
34 Park Street
New Haven, Conn. 06508
Phone: 772-3300

Connecticut Valley Hospital
Middletown, Conn. 06457
Phone: 347-5651

Franklin S. DuBois Day Treatment Center
49 Glenbrook Rd.
Stamford, Conn. 06902
Phone: 327-0620

Fairfield Hills Hospital
Newtown, Conn. 06470
Phone: 426-2531

Greater Bridgeport Community Mental Health Center
1635 Central Ave.
Bridgeport, Conn. 06610
Phone: 348-1711

High Meadows
825 Hartford Turnpike
Hamden, Conn. 06517

Norwich Hospital
Norwich, Conn. 06360
Phone: 889-7361

Undercliff Mental Health Center
Meriden, Conn. 06450
Phone: 235-5743

Whiting Forensic Institute
P. O. Box 70
Middletown, Conn. 06457
Phone: 347-8059

Children's Unit
Connecticut Valley Hospital
Middletown, Conn. 06457
Phone: 347-5651

Inquiries concerning drug and alcohol dependency may also be made at the following locations:

Regional Outpatient Clinic
Alcohol & Drug Dependence Div.
Dept. of Mental Health
1635 Central Avenue
Bridgeport, Conn. 06610
Phone: 384-1711

Regional Outpatient Clinic
Alcohol & Drug Dependence Div.
Dept. of Mental Health
2 Holcomb St.
Hartford, Conn. 06112
Phone: 566-3124

Regional Outpatient Clinic
Alcohol & Drug Dependence Div.
Dept. of Mental Health
160 Grandview Avenue
Waterbury, Conn. 06710
Phone: 757-9687

Regional Outpatient Clinic
Alcohol & Drug Dependence Div.
Dept. of Mental Health
412 Orange St.
New Haven, Conn. 06511
Phone: 787-5931

Regional Outpatient Clinic
Alcohol & Drug Dependence Div.
Dept. of Mental Health
60 Gurensey Street
Stamford, Conn. 06901
Phone: 359-0710

Regional Outpatient Clinic
Alcohol & Drug Dependence Div.
Dept. of Mental Health
110 Broadway
Norwich, Conn. 06360
Phone: 889-3824

Drug information is available at the:

Connecticut Mental Health Center
New Haven, Phone: 772-3300

Capitol Region Drug Information Center
179 Allyn Street, Suite 403, Hartford, Conn. 06102 Tel. 547-1300

Admission into state sponsored treatment facilities is defined in a number of Connecticut statutes. Specific information on the various statutes is available through the Public Information Officer of the State Department of Mental Health.

The following are some of the modes of admission to state facilities:

Informal—request made by patient; free to leave at any time. (Section 17-187(b).)

Voluntary—request made in writing by patient; may not be confined more than ten days after written request to leave. (Section 17-187(a).)

Informal or Voluntary for drug dependent person—inpatient treatment available; patient shall not be discharged for at least 90 days after admission. (Section 19-494.)

Physician's Emergency Certificate—issued by a physician; commitment for no more than 45 days. (Section 17-183.)

Court Commitments—certain courts may commit a person on grounds of insanity, mental retardation, alcoholism or drug dependency to certain facilities of the Department of Mental Health and/or to the Commissioner for treatment. (Section 54-40 and Section 17-185.)

REPORTABLE DISEASES

Section 19-13-A3 of the Connecticut statutes requires that a physician report to the local director of health within whose jurisdiction such patient is, the full name, age, address and occupation of the patient, with the name of the disease. The report may be made by telephone if practicable, but must also be submitted in writing within twelve hours after the recognition of the disease. Special forms for reporting this information are available from the State Department of Health.

- Actinomycosis
- Amebiasis
- Anthrax
- Botulism (see Food Poisoning)
- Brucellosis (Undulant Fever)
- Chancroid
- Chickenpox (Varicella)
- Cholera (Asiatic)
- Conjunctivitis, infectious (all types except trachoma)
- (During first 14 days of life reported as ophthalmia neonatorum)
- (See ophthalmia neonatorum)
- Diarrhea of Newborn Epidemic (Institutional)
- Diphtheria (all forms)
- Dysentery, Amebic (see Amebiasis)
- Dysentery Bacillary (Shigellosis)
- Encephalitis (all types)
- Food Poisoning
  - A. Staphylococcus
  - B. Botulism
  - C. Other
- German Measles (Rubella)
- Glanders
- Glomerulonephritis (acute)
- Gonorrhea
- Granuloma Inguinale
- Hemorrhagic Jaundice (see Leptospirosis)
- Hepatitis, Infectious (Acute catarrhal jaundice)
- Hepatitis, Serum
- Histoplasmosis
- Hookworm Infection
- Impetigo of the Newborn (Pemphigus neonatorium Institutional)
- Influenza
- Lead Poisoning—(Abnormal body burden of lead)
- Leprosy (Hansen's disease)
- Leptospirosis (Including Hemorrhagic Jaundice and Weil's disease)
- Lymphogranuloma Venereum (Inguinale)
- Malaria
- Measles (Rubeola)
- Meningitis
  - A. Meningococcal and Meningococcemia
  - B. Hemophilus Influenzae
  - C. Other Types
- Mononucleosis Infectious (Glandular fever)
- Mumps (Infectious parotitis)
- Ophthalmia Neonatorum (Includes any infection of the babies' eyes during the first 14 days of life)
- Paratyphoid Fever
- Pertussis (Whooping Cough)
- Plague
- Poliomyelitis
- Psittacosis (Ornithosis)
- Q Fever
- Rabies (in humans)
- Rheumatic Fever
- Rickettsialpox
- Ringworm of the Scalp (Tinea Capitis)
- Rocky Mountain Spotted Fever
- Salmonella Infections
  - 1. Paratyphoid syndrome
  - 2. Gastroenteritis
  - 3. Other Types
- Scarlet Fever (see Streptococcal Infections, Respiratory)
- Smallpox (Variola minor and Variola major)
- Streptococcal Infections Respiratory (including Scarlet Fever)
- Staphylococcal Infection
  - A. Insti. Outbreaks
  - B. Under 6 weeks' age
- Streptococcal Infections (Other than respiratory)
  - A. Erysipelas
  - B. Puerperal Infection
- Syphilis
- Tetanus
- Trachoma
- Trichinosis
- Tuberculosis, Other Forms
- Tuberculosis, Pulmonary
- Tularemia
- Typhoid Fever
- Typhus Fever (Epidemic and Endemic)
- Undulant Fever (Brucellosis)
- Whooping Cough (Pertussis)
- Yellow Fever

Diseases Reportable Directly To State Department of Health

Epilepsy

Diseases Reportable Directly To State Department of Labor

Occupational Diseases

REGULATIONS CONCERNING CONTROLLED SUBSTANCES

The following information on controlled substances, as they relate to practicing physicians, has been condensed from various state and federal sources.

Literature on controlled substances, dangerous drugs, drug legislation and drug abuse may be obtained by contacting:

Drug Enforcement Agency
Room 628E
450 Main Street
Hartford, Connecticut 06103 (244-3230)

or Drug Control Division
Department of Consumer Protection
State Office Building—Room G37—165 Capitol Ave.
Hartford, Connecticut 06115 (566-4490)

Practicing physicians involved with either the purchasing, the administering, the dispensing or the prescribing of controlled dangerous substances must file a controlled substances registration form with the Department of Justice, Drug Enforcement Agency, P. O. 28083, Central Station, Washington, D. C. 20005. Each physician who files such a form will be issued a seven digit BNDD number.

A renewal application must be filed each year. A $5.00 annual fee must accompany each application. Failure to register annually will make a physician ineligible to purchase, to administer or to prescribe controlled drugs. The expiration date will not be uniform for all the physicians in the state. The renewal forms must be filed 45 to 60 days before the expiration date which is printed on the BNDD forms which will be mailed to each physician. A complete and accurate inventory of all controlled drugs must be taken upon original registration. Thereafter a biennial inventory should be taken on May 1 of each second year and filed with other drug records.

In Connecticut physicians are permitted by law to dispense all drugs which are referred to in question No. 11 on the forms. Connecticut physicians should check all six boxes under that question.

The BNDD number must be printed on each prescription blank in such a way that it can not be altered. Generally speaking, controlled drugs are all narcotics, amphetamines, barbiturates and other potent drugs having a potential for abuse as defined under state and federal laws. Stock packages of controlled drugs bear the capital letter "C" with a Roman numeral II — III — IV — or V on the label to identify the controlled drug schedule they are in.

If a practitioner engages in purchasing and dispensing any controlled drugs he is required to keep a record of all controlled drugs received and dispensed by him. The record should indicate the date of receipt, the name and address of the person from whom received, the kind and quantity of drugs received. Dispensing records must include the date, the name and address of the person to whom the drugs were dispensed and the kind and quantity of drugs dispensed. Each record must be separately maintained, kept readily available and on hand for three years. The records may not be kept in code or in a foreign language. Schedule II substances can only be purchased on official BNDD forms from a licensed wholesaler or manufacturer. Other schedule substances may be purchased from wholesalers or manufacturers without BNDD forms. In no instance should any controlled substance for office use be purchased using prescription blanks.

Failure to keep any record required may result in a $500.00 fine and if the failure was a deliberate attempt to circumvent the law the fine may be $1,000.00, 30 days imprisonment or both.

Security regulations require that Schedule II drugs must be adequately protected and stored to prevent theft. If a practitioner's supply exceeds 12 units of Schedule II narcotic drugs an approved safe must be obtained for their storage. In no case shall a practitioner's narcotic stock, no matter how small in amount, be left in an unlocked cabinet, automobile or unattended.

Any loss, destruction or theft of narcotics shall be reported by all registrants within seventy-two hours to the Drug Control Division and to the Drug Enforcement Agency on form BND 106. Requests to destroy excess or undesired controlled drugs shall be made to the Drug Control Division, Department of Consumer Protection.

Each practitioner of the healing arts shall report within thirty days to the Commissioner of Health the full name, address and date of birth of every person who, in his opinion, is a drug-dependent person upon controlled drugs, as defined in Section 19-443. Practitioners making such reports in good faith shall be immune from any civil or criminal liability that otherwise might be incurred from the making of such report. No such report or the information therein shall be admissible in any criminal prosecution or used for other than rehabilitation, statistical or medical purposes and each such report shall be held confidential by the commissioner.

Within 72 hours after authorizing an emergency oral prescription, the prescribing individual practitioner must submit a written prescription for the emergency quantity prescribed to the dispensing pharmacist. The written prescription may be delivered to the pharmacist in person or by mail, but if delivered by mail it must be postmarked within the 72 hour period.

A physician in good faith and in the course of his professional practice only, may prescribe, administer and dispense controlled drugs or he may cause the same to be administered by a nurse or intern under his direction and supervision, for demonstrable physical or mental disorders *but not for drug dependence,* except in a recognized approved program, such as Methadone maintenance, or except when specifically authorized by the Commissioner of Mental Health to treat drug dependence.

Control Drug Prescriptions:

All prescriptions for controlled drugs shall include (1) the name and address of the patient, or the name and address of the owner of an animal and the species of the animal, (2) whether the patient is an adult or a child, or his specific age, (3) the compound or preparation prescribed and the amount thereof, (4) directions for use of the medication, (5) the name and address of the prescribing practitioner and (6) the date of issuance, (7) the BNDD number of the practitioner. Prescriptions when written shall be written in ink or in indelible pencil or by typewriter. No duplicate, carbon or photographic copies and no printed or rubber-stamped orders shall be considered valid prescriptions. No prescription or order for any controlled substance issued by a practitioner to an inanimate object or thing shall be considered a valid prescription. Prescriptions for schedule II substances shall be signed by the prescribing practitioner at the time of issuance and previously signed orders for such schedule II substances shall not be considered valid prescriptions.

REPORTING SUSPECTED CHILD ABUSE

Child abuse is defined by Public Act 73-205 as physical injury or injuries inflicted by other than accidental means, or injuries at variance with the history given: maltreatment, including but not limited to malnutrition; sexual molestation; cruel punishment, or deprivation of necessary food, clothing or shelter.

Public Act 73-205 mandates a number of professional groups, including physicians, surgeons, resident physicians, interns, medical examiners and nurses, to report all cases of suspected abuse immediately to State or local police or to the State Welfare Department, to be followed within 72 *hours by a written report (Form W-136)* to be sent to the State Welfare Department. Any person mandated to report who fails to report may be fined up to five hundred dollars ($500). Anyone who in good faith reports suspected abuse is granted immunity from civil or criminal liability.

The law provides that any physician examining a suspected abused child has the right to keep such child in the custody of a hospital for up to 96 hours without parental consent. The State Welfare Department maintains a confidential registry of suspected abused children, which is available at all times to mandated reporters. The expense for temporary care and custody shall be paid by the town.

REGISTRATION OF X-RAY DEVICES USED FOR DIAGNOSIS AND THERAPY

Connecticut statutes require that the owner of any device or devices emitting x-rays which are used for diagnostic and therapeutic purposes must be registered with the State Department of Environmental Protection, State Office Building, Hartford, Connecticut 06115. Owner, according to statute, means any person or organization having by law the administrative control of the x-ray device or devices.

Registrations at the present time must be renewed biennially during the month of April in the even-numbered years. The fee at each location is fifteen dollars for one x-ray device, five dollars for the second device, and one dollar for each additional x-ray device registered by one owner.

MEDIC ALERT FOUNDATION

Physicians who receive inquiries concerning identification tags for individuals with medical problems which should be known in an emergency may wish to refer the inquiry to:

Medic Alert
Foundation Headquarters
Turlock, California 95380

Medic Alert — 236-3667
645 Farmington Avenue
Hartford, Conn. 06105

HOSPITAL POISON CONTROL CENTERS IN CONNECTICUT

City	*Name and Address*	*Telephone*	*Director and Assistant Director*
Bridgeport	Bridgeport Hospital Poison Control Center 267 Grant Street 06602	384-3566	Francis P. A. Williams, M.D. Sally A. Tarick, R.N.
	St. Vincent's Hospital Poison Control Center 2820 Main Street 06606	334-1081	Ramona Byard, M.D.
Danbury	Danbury Hospital Poison Control Center 95 Locust Avenue 06810	744-2300	Louis Rogol, M.D. Mr. Henry Laurent
Hartford	St. Francis Hospital Poison Control Center 114 Woodland Street 06105	249-8281	James E. O'Brien, M.D., Ph.D.
Middletown	Middlesex Memorial Hospital Poison Control Center 28 Crescent Street 06457	347-9471	Clarence W. Harwood, M.D. L. Annino, Ph.G.
New Britain	New Britain General Hospital Poison Control Center 100 Grand Street 06050	224-5672	Roger T. Scully, M.D.
New Haven	The Hospital of St. Raphael Poison Control Center 1450 Chapel Street 06511	772-3900	John M. Christoforo, M.D.
	Yale-New Haven Hospital Poison Control Center 789 Howard Avenue 06504	436-1960	Thomas F. Dolan, Jr., M.D. Allan Myers, M.D.
Norwalk	Norwalk Hospital Poison Control Center 24 Stevens Street 06852	838-3611	Edward A. Rem, M.D.
Stamford	Stamford Hospital Poison Control Center Shelburne Road 06902	327-1234	Ralph A. Pesiri, M.D.
Waterbury	St. Mary's Hospital Poison Control Center 56 Franklin Street 06702	756-8351	Morris Coshak, M.D. Sister Mary Lorraine, Ph.G.

CONNECTICUT STATE DEPARTMENT OF HEALTH
POISON INFORMATION CENTER
HARTFORD, CONNECTICUT 06115
Estelle Siker, M.D., M.P.H., *Medical Director*
F. Weston Pierce, *Technical Director*
Emergency Telephone 566-3456

THE CONNECTICUT STATE MEDICAL SOCIETY
160 ST. RONAN STREET
NEW HAVEN, CONNECTICUT 06511

OFFICERS — 1974-1975

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Alternate: Orvan W. Hess, 2 Church Street So., New Haven 06519	1/1/74—12/31/75
*E. Tremain Bradley, 31 Stevens Street, Norwalk 06850	1/1/73—12/31/74
*Alternate: Sidney L. Cramer, 21 Woodland Street, Hartford 06105	1/1/73—12/31/74
*J. Alfred Fabro, 94 Church Street, Torrington 06790	1/1/73—12/31/74
*Alternate: Morris A. Granoff, 327 Whalley Avenue, New Haven 06511	1/1/73—12/31/74

EXECUTIVE DIRECTOR—CSMS: William R. Richards, 160 St. Ronan Street, New Haven 06511

EDITOR "CONNECTICUT MEDICINE": J. Alfred Fabro, 94 Church Street, Torrington 06790

*Two Delegates and Two Alternates to the A.M.A. 1/1/75—12/31/76

E. Tremain Bradley, 31 Stevens Street, Norwalk 06850
Alternate: Sidney L. Cramer, 21 Woodland Street, Hartford 06105

J. Alfred Fabro, 94 Church Street, Torrington 06790
Alternate: Morris A. Granoff, 327 Whalley Avenue, New Haven 06511

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Roster of Committees, Representatives and Advisors

Elected by House of Delegates

EDUCATION

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Howard Levine, New Britain General Hospital, New Britain 06052
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Michael J. Esposito, 379 Oregon Rd., Meriden 06450 1972-1977
D. Norman Markley, 442 Farmington Ave., Hartford 06105 1973-1978
Malcolm M. Ellison, 328 Montauk Ave., New London 06320 1974-1979

MEDICAL ECONOMICS

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*Saul A. Frankel, 2 Church St., South., New Haven 06519
Marshall Franklin, 17 Old King's Highway, Darien 06820
*Robert S. Gillcash, 36 Watson St., Willimantic 06226
Robert H. Jordan, 111 Park St., New Haven 06511
*Robert E. Karns, 29 Haynes St., Manchester 06040
*Seymour I. Kummer, One Ellington Ave., Rockville 06066
*Frank Lovallo, Sharon Medical Arts Center, Sharon 06069
*Nicholas T. Phillips, 93 Sachem St., Norwich 06360
Bruce R. Valentine, E. F. Clark Memorial Center, Abington 06230
*Arthur L. Waldman, 269 Main St., Cromwell 06416

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Harry P. Engel, 50 Ridgefield Ave., Bridgeport, *Chairman* 06610
Judicial Committee
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Hartford — Rodman J. Bendett, 60 Gillett St., Hartford 06105
Litchfield — Harry C. Briggs, 71 Spencer St., Winsted 06098
Middlesex — William F. Bauer, Jr., Fire Tower Rd. Killingworth 06417
New Haven — Charles H. Audet, 3 Second Ave., Waterbury 06710
New London — Paul Sutton, 174 Bridge St., Groton 06340
Tolland — Charles G. O'Connell, Box 2278, Vernon 06080
Windham — Andrew O. Laakso, 39 Broad St., Danielson 06239

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*Sidney L. Cramer, 21 Woodland St., Hartford 06105
*Allyn B. Dambeck, R.F.D. #4, Rockville 06066
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Marvin Garrell, 60 Katona Dr., Fairfield 06432
*Robert S. Gillcash, 36 Watson St., Willimantic 06226
Harry R. Gossling, 85 Jefferson St., Hartford 06106
*David A. Grendon, Sharon Hospital, Sharon 06069
Daniel Hamaty, 1303 Chapel St., New Haven 06511
Orvan W. Hess, 2 Church St., South, New Haven 06519
*Edward A. Kamens, 881 Lafayette St., Bridgeport 06603
Herbert A. Kaufmann, 770 Saybrook Rd., Middletown 06457
Stewart A. King, 70 Mill River Rd., Stamford 06902
*John J. Mendillo, 45 Trumbull St., New Haven 06510
Kurt S. Pelz, 16 Sol's Point Rd., Clinton 06413
James H. Root, Jr., 1389 West Main St., Waterbury 06708

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*County Nominee

Guy W. Van Syckle, 30 Hospital Ave., Danbury 06810
David L. Warren, 56 Haynes St., Manchester 06050
Frederick C. Weber, Jr., 185 Putnam Park, Greenwich 06830

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*County Nominee

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George H. Bray, 73 Cedar St., New Britain 06052
Eugene H. Corley, 1026 Park Ave., Bridgeport 06604
Mehdi Eslami, 1389 West Main St., Waterbury 06708
Thomas M. Feeney, 4 Sunset Terrace, West Hartford 06107
Francis Gallo, Medical Arts Building, Winsted 06098
Leo P. Giardi, 561 New Britain Ave., Hartford 06108
Paul S. Goldstein, 2 Church St. South, New Haven 06519
Elwood F. Ireland, Jr. 50 Ridgefield Ave., Bridgeport 06610
Milton L. Jennes, 1389 West Main St., Waterbury 06708
Haik Kavookjian, 62 Stanton Rd., Darien 06823
Albert L. Larson, 1 Tower Square, Hartford 06120
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Carl G. Peterson, 150 Mansfield Ave., Willimantic 06226
James H. Root, Jr., 1389 West Main St., Waterbury 06708
Theodore Zanker, 315 Whitney Ave., New Haven 06511

PROFESSIONAL RELATIONS

Judicial Committee

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New Fairfield	Fairfield
Newfield	Middlesex
New Hartford	Litchfield
New Haven	New Haven
Newington	Hartford
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New Preston	Litchfield
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Uncasville	New London
Union	Tolland
Union City	New Haven
Unionville	Hartford
Vernon	Tolland
Versailles	New London
Voluntown	New London
Wallingford	New Haven
Wapping	Hartford
Warehouse Pt.	Hartford
Warren	Litchfield
Washington	Litchfield
Waterbury	New Haven
Waterford	New London
Watertown	Litchfield
Westbrook	Middlesex
West Cornwall	Litchfield
West Hartford	Hartford
West Haven	New Haven
Weston	Fairfield
Westport	Fairfield
West Simsbury	Hartford
Wethersfield	Hartford
Willington	Fairfield
Wilton	Fairfield
Winchester	Litchfield
Windham	Windham
Windsor	Hartford
Windsor Locks	Hartford
Winsted	Litchfield
Wolcott	New Haven
Woodbridge	New Haven
Woodbury	Litchfield
Woodmont	New Haven
Woodstock	Windham

ROSTER OF MEMBERS 1974

Fairfield County Association

President: Edward A. Kamens, 881 Lafayette, Bridgeport 06603

Vice-President: Rector T. Davol, 49 Lake Ave., Greenwich 06830

Secretary: Ralph L. Parker, 881 Lafayette, Bridgeport 06604

Treasurer: H. David Frank, 114 State, Bridgeport 06603

Councilor: Edmund F. Hecklau, 42 Sherwood Pl., Greenwich 06830

Associate Councilors:

Edward A. Kamens, 881 Lafayette, Bridgeport 06603
John J. McGarry, 36 Old King's Hwy, South, Darien 06820

Executive Secretary: Mr. Arnold P. Olson
Executive office: 285 Golden Hill, Bridgeport 06604
Annual Meeting, Second Tuesday in April
Semi-Annual Meeting, First Wednesday in October

BETHEL 06801

1974 Binnie, Hugh Sharp Polson, 236 Greenwood Ave.
1967 King, Edmund Joseph, Old Shelter Rock Rd.
1945 Mandl, George, 234 Greenwood Ave.
1938 Trimpert, Albert Joseph, 155 Greenwood Ave.
1939 Wolfson, Dexter, 14 Grassy Plain

BRIDGEPORT

1969 Abrams, Harold, 881 Lafayette 06603
1965 Alexander, James Maurice, 50 Ridgefield Ave. 06610
1932 Alpert, Max, 881 Lafayette 06603
1944 Amarant, Leo, 881 Lafayette 06603
1953 Anderson, Harry Brutus, 1459 Main 06603
1942 Apuzzo, Anthony Albert, 2660 Main 06604
1973 Armm, Milton F., 1438 Park Ave. 06604
1971 Auerbach, Sumner Robert, 50 Ridgefield Ave. 06610
1973 Bader, Lewis Martin, 881 Lafayette 06604
1938 Bakunin, Maurice Irving, Bridgeport Hospital 06610
1916 Banks, Daniel Tony, 385 Barnum Ave. 06608
1968 Barrero, Ezequiel Fernandez, 401 Noble Ave. 06608
1951 Baum, Seymour James, 881 Lafayette 06603
1957 Bayless, Allan Eugene, 50 Ridgefield Ave. 06610
1941 Beck, Sidney Henry, 51 Golf View Ter. 06603
1970 Berkun, Sumner Gerald, 881 Lafayette Blvd. 06603
1913 Bernstein, Abraham, 881 Lafayette 06603
1956 Bernstein, Jerome, 340 Capitol Ave. 06606
1961 Berry, Robert W., 2660 Main 06606
1969 Bersier, Andre Marc, 2660 Main 06606
1928 Biehn, Sidney Lister, 130 Pinepoint Dr. 06606
1946 Birney, Thomas Peter, 1984 Fark Ave. 06604
1949 Blaney, Cyril Chandler, 3202 Main 06606
1952 Blank, Miriam Bennett, 420 Brooklawn Ave. 06604
1963 Blank, Victoria E., 3321 Park Ave. 06604
1935 Bogin, Maxwell, 340 Capitol Ave. 06606
1973 Boreyko, Christopher Joseph, 562 Boston Ave. 06610
1963 Borsos, Lajos A., 965 Fairfield Ave. 06605
1954 Bousa, Walter Shackley, 3163 Main 06606
1959 Bradley, Edward Grenelle, 50 Ridgefield Ave. 06610
1947 Braun, Rudolf, 525 Clinton Ave. 06605
1971 Bravo, Anthony John, 50 Ridgefield Ave. 06610
1941 Brier, Hyman David, 2574 Main 06606
1940 Brooks, Paul Lester, 1260 East Main 06608
1939 Buckhout, George Atherton, 50 Ridgefield Ave. 06610
1970 Burd, Robert M., 881 Lafayette 06603
1955 Burke, William Harris, 1026 Park Ave. 06604
1969 Byard, Ramona Marie, St. Vincent's Hospital 06606
1943 Cacace, Vincent Anthony, 1438 Park Ave. 06604
1947 Camarda, Anthony L., 690 Clinton Ave. 06605
1968 Canter, Norman Michael, 50 Ridgefield Ave. 06610
1945 Capobianco, Arthur Paul, 508 Noble Ave. 06608
1962 Capodilupo, Vincent Michael, 754 Clinton Ave. 06604
1973 Cardin, Mary Jean, 50 Ridgefield Ave. 06610
1946 Cardone, Michael James, 2989 Main 06606
1974 Carolan, Patrick James, 3715 Main 06606
1932 Carroll, Philip Roger, Jr., 1131 Noble Ave. 06608
1947 Caserta, Silvio Joseph, 880 North Ave. 06606
1947 Cavaliere, Vincent J., 798 North Ave. 06606
1973 Chadda, Shashi K. B., St. Vincent's Hospital 06606
1949 Chiota, Joseph A., 562 Boston Ave. 06610
1954 Cleaver, Robert S., Jr., 50 Ridgefield Ave. 06610
1973 Cohen, Howard Roy, 2820 Main 06606
1959 Cohen, Stanley Leonard, 1026 Park Ave. 06604
1952 Connell, Thomas Hilbert, Jr., 50 Ridgefield Ave. 06610
1959 Cook, William Henry, 2660 Main 06606
1967 Cooney, Gerald Evans, 3163 Main 06606
1957 Cooper, Milton, 881 Lafayette 06603
1954 Corley, Eugene Henry, 1026 Park Ave. 06604
1963 Corso, Philip Francis, 2660 Main 06606
1971 Coyle, Thomas Fanning, 226 Mill Ave. 06610
1963 Creatura, John Anthony, 50 Ridgefield Ave. 06610
1947 Curley, William Henry, Jr., 881 Lafayette 06603
1971 D'Aiuto, Michael Leonard, 50 Ridgefield Ave. 06610
1972 Dalal, Bipinchand Jivanchand, 695 Park Ave. 06604
1950 Dean, Michael Augustine, 2660 Main 06606
1972 DeBernardo, Robert Louis, 3715 Main 06606
1946 Delevett, Allen Fitzhugh, 114 State 06603
1950 DeLuca, Joseph Vincent, 251 North Ave. 06606
1935 Del Vecchio, Leonard Frederick, St. Vincent's Hospital 06606
1947 Deren, M. David, 1260 Park Ave. 06604
1954 Doering, Robert Warren, 1836 Noble Ave. 06610
1958 Doherty, Harold Edward, 3175 Main 06606
1958 Dolan, Everitt Patrick, 881 Lafayette 06603
1963 Donnelly, Vincent Peter, 2660 Main 06606
1945 Donnelly, William Augustus, 2112 North Ave. 06604
1954 Dugas, Joseph Albert, 660 Kossuth 06608
1941 Duzmati, Paul Peter, 1904 Boston Ave. 06610
1963 Dworken, Donald Savin, 50 Ridgefield Ave. 06610
1954 Eckels, Howard Samuel, 4747 Main 06606
1937 Eimas, Aaron, 340 Capitol Ave. 06606
1970 Eisenberg, Joel Howard, 4749 Main 06606
1948 Elliott, Frank George, Jr., Bridgeport Hospital 06610
1963 Engel, Harry Paul, 50 Ridgefield Ave. 06610
1971 Eras, Philip, 2660 Main 06606
1939 Esposito, Joseph John, 50 Ridgefield Ave. 06610
1968 Fazzone, Andrew Christian, 50 Ridgefield Ave. 06610
1973 Federico, Frank Nicholas, 2660 Main 06606
1969 Feldman, Morton George, 881 Lafayette 06603
1961 Feldman, Saul Morry, 2660 Main 06606

1961 Feroleto, George Joseph, 1660 Park Ave. 06604
1956 Flagg, James Anthony, Bridgeport Hospital 06610
1965 Fleisher, Philip, 1438 Park Ave. 06604
1969 Flemister, Adolph Samuel, 944 Fairfield Ave. 06605
1938 Folcy, Frances Xavier, 2660 Main 06606
1957 Fox, Henry John, 10 Washington Ave. 06604
1954 Frank, Howard David, 114 State 06603
1956 Frenkel, Henry Hans, 827 North Ave. 06606
1958 Fromm, Stanley M., 260 Main 06606
1968 Gacso, William Julius, 2820 Main 06606
1974 Gargano, Paul Andrew, 114 State 06604
1956 Gariepy, John Arthur, 50 Ridgefield Ave. 06610
1968 Garofalo, George Anthony, 30 DeRamo Pl. 06606
1951 Geanuracos, George James, 50 Ridgefield Ave. 06610
1927 Gildea, Mark Andrew, 2600 Park Ave. 06604
1971 Gill, Alan Jay, 881 Lafayette 06603
1957 Gill, Nicholas Patrick, 50 Ridgefield Ave. 06610
1962 Glass, Mac Ellis Kopel, 50 Ridgefield Ave. 06610
1948 Glass, William I., 881 Lafayette 06603
1950 Goodrich, Albert, 50 Ridgefield Ave. 06610
1946 Goodrich, William J., 3120 Fairfield Ave. 06605
1956 Gordon, Benjamin Dichter, Bridgeport Hospital 06610
1973 Grayer, David I., 4747 Main 06606
1916 Griffin, Daniel Patrick, 3030 Park Ave. 06606
1943 Grossman, John Henry, 144 Golden Hill 06603
1941 Gulash, John Robert, 562 Boston Ave 06610
1949 Guttman, Tibor, 1549 Fairfield Ave. 06605
1967 Haghighat, Ahmad, 2820 Main 06606
1928 Harshbarger, Isaac Long, 50 Ridgefield Ave. 06610
1963 Harshbarger, James Edward, 50 Ridgefield Ave. 06610
1972 Hau, Kee-Hung, 50 Ridgefield Ave. 06610
1970 Heller, Warren, 3715 Main 06606
1938 Hennessey, Joseph Gerard, 482 Brewster 06605
1961 Homza, L. Ronald, 2660 Main 06606
1963 Hope-Ross, Peter Edward, 695 Park Ave. 06604
1933 Horn, Benjamin, 3900 Park Ave. 06604
1946 Horowitz, Isaac, 881 Lafayette 06603
1955 Horowitz, Joseph Lewis, 2616 Main 06606
1956 Inder, Harry Albert, 4747 Main 06606
1972 Iodice, Michael Thomas, 50 Ridgefield Ave. 06610
1956 Ireland, Elwood Fremont, Jr., 50 Ridgefield Ave. 06610
1962 Jamshidi, Ahmed, 50 Ridgefield Ave. 06610
1962 Johnson, George Blake, Jr., 2952 Main 06606
1958 Kamens, Edward A., 881 Lafayette 06603
1942 Kaplan, Leon, 881 Lafayette 06603
1960 Kasper, Richard Francis, 2085 Madison Ave 06606
1969 Kauders, James Theodore, 2616 Main 06606
1941 Kaufman, William, 540 Brooklawn Ave. 06604
1967 Kay, Chester J., 881 Lafayette Blvd. 06604
1969 Kelleher, Michael Joseph, 2660 Main 06606
1948 Kenigsberg, Nathaniel, 50 Ridgefield Ave. 06610
1946 Kleinman, Harold Louis, 2051 North Ave. 06604
1948 Kogut, Henry Vincent, 50 Ridgefield Ave. 06610
1924 Kornblut, Alfred, 1539 Fairfield Ave. 06603
1970 LaMastra, Philip Michael, 4747 Main 06606
1964 Landwirth, Julius, Bridgeport Hospital 06610
1961 Lapinski, Lucian Stanley, 881 Lafayette 06603
1962 Lawrence, John James, 2660 Main 06606
1962 Lebowitz, Wallace Bernard, 2660 Main 06606
1963 Lee, Nam Hyung, 267 Grant 06610
1959 Leone, Paul Vincent, 50 Ridgefield Ave. 06610
1943 Lesko, Joseph Michael, 144 Golden Hill 06603
1933 Levinsky, Maurice, 1425 Noble Ave. 06610
1956 Levy, Theodore Steinberg, 2616 Main 06606
1972 Lewin, Marvin Lionel, 50 Ridgefield Ave. 06610
1970 Lewis, William Stanley, 837 Fairfield Ave. 06604
1973 Lisi, Kenneth Ronald, 29 Federal 06606
1961 Lobdell, David Hill, St. Vincent's Hospital 06606
1942 Lopatin, Colman, 971 Fairfield Ave. 06605
1973 Lovanio, Richard Gabriel, 3715 Main 06606
1948 Luciano, Michael Charles, 2089 North Ave. 06604
1947 Lynch, Vincent Aloysius, 798 North Ave. 06606
1944 Lyon, Grover Arthur, 2009 North Ave. 06604
1955 Madwed, Alice Ente, 25 Saxton Dr. 06604
1957 Malyska, Francis Anthony, 4747 Main 06606
1971 Mangieri, John Vito, 50 Ridgefield Ave. 06610
1955 Maniatis, William Richard, 881 Lafayette 06603
1956 Manjoney, Robert John, 2616 Main 06606
1958 Manjoney, Vincent August, 2708 Main 06606
1949 Markley, Ludwig Louis, 2660 Main 06606
1969 Marks, Eugene M., 939 Barnum Ave. 06602
1966 Marrash, Samir E., 2660 Main 06606
1951 Martelon, George Fred, 1285 Boston Ave. 06602
1941 Martin, Raymond Alfred, 50 Ridgefield Ave., 06610
1972 Masi, Anthony Vincent, 4695 Main 06606
1942 Massey, Daniel M., Bridgeport Hospital 06610
1959 Maxham, David Lincoln, St. Vincent's Hospital 06606
1965 McCullough, Charles Discant, 3163 Main 06606
1952 McGarry, John F., 50 Ridgefield Ave. 06610
1974 McKnight, William Kuhn, 1635 Central Ave. 06610
1967 McLoughlin, Peter Joseph, 1984 Park Ave. 06604
1952 Meltzer, Saul B., 2660 Main 06606
1970 Mergenthaler, Francis William, 2660 Main 06606
1946 Meshken, Jacob, 2616 Main 06606
1964 Methot, Lawrence Gerard, 2839 Main 06606
1964 Michaels, Arthur Hatzi, 2167 North Ave. 06604
1961 Michalka, Joseph John, 114 State 06603
1947 Molnar, George J., 135 Brooklawn Ave. 06604
1940 Monahan, David Tuite, 2660 Main 06606
1932 Mooney, Sydney, 881 Lafayette 06603
1946 Morris, Felix R., 953 East Main 06608
1973 Musto, Anthony, 50 Ridgefield Ave. 06610
1948 Nagourney, David, 1756 East Main 06610
1959 Neth, Edward Joseph, 2475 North Ave. 06604
1948 Newman, Abbott A., 2660 Main 06606
1957 Niesyn, Erwin, 50 Ridgefield Ave. 06610
1954 Noonan, Robert Henry, 385 Noble Ave. 06608
1947 Northman, Frank Fred, 753 Lakeside Dr. 06606
1968 Oesau, Harold Thomas, Jr., 50 Ridgefield Ave. 06610
1947 O'Looney, John J., Jr., 1075 Noble Ave. 06608
1948 Olsavsky, John Cyril, 10 Washington Ave. 06604
1944 Oster, Kurt A., 881 Lafayette 06603
1947 Owens, Andrew Paul, 50 Ridgefield Ave. 06610
1940 Panettieri, Andrew Joseph, Bridgeport Hospital 06610
1942 Parker, Ralph Layton, 881 Lafayette 06603
1937 Pascal, Thomas J., 1560 Noble Ave. 06610
1944 Pasquariello, D. William, 2969 Main 06606
1940 Penner, Sidney Lincoln, 158 Mill Hill Ave. 06610
1964 Peralta, Carlos, 881 Lafayette 06603
1970 Perlman, Jerold M., 50 Ridgefield Ave. 06610
1972 Pesce, Joseph Raymond, 2837 Main 06606
1973 Placer, Joseph William, Park City Hospital 06606
1970 Pleban, Walter Edward, 50 Ridgefield Ave. 06610
1953 Pope, Russell, Bridgeport Hospital 06610
1968 Portnoy, Lewis Morton, 695 Park Ave. 06604
1968 Pua, Purificacion, 50 Ridgefield Ave. 06610
1958 Ragusa, Robert Paul, 4747 Main 06606
1970 Rapoport, Melvyn, 50 Ridgefield Ave. 06610
1972 Reichgut, Martin H., 881 Lafayette 06603
1953 Renaud, Raoul Henry, 50 Ridgefield Ave. 06610
1942 Resnik, Harry, 26B Greenhouse Rd. 06606
1938 Ribner, Harold 881 Lafayette 06603

1950 Riccio, Frank Joseph, 923 East Main 06608
1967 Roach, James Patrick, 881 Lafayette 06603
1961 Rosenbaum, Nathan, 4747 Main 06606
1944 Rosenberg, Hans August, 425 Beechwood Ave. 06604
1959 Rosenberg, Murray Alan, 881 Lafayette 06604
1946 Rosenberg, Saul, 1950 Park Ave. 06604
1946 Rosner, Fred, 2333 North Ave. 06604
1973 Rusch, Ortwin Ferdinand, 2820 Main 06606
1949 Russo, John Rocco, 3296 Main 06606
1948 Russo, Robert Dante, 10 Washington Ave. 06604
1949 Saidel, Joseph W., 932 East Main 06608
1954 Samuelson, Arthur Wesley, 50 Ridgefield Ave. 06610
1958 Santella, Salvatore Michael, 2210 Park Ave. 06604
1963 Saraczynski, Daniel Leon, 2001 Park Ave. 06604
1948 Savin, Sanford, 2660 Main 06606
1971 Sax, Robert Eugene, 782 Clinton Ave. 06604
1942 Scalzi, Leonard Conrad, 924 Noble Ave. 06608
1967 Scavo, Vincent Joseph, 923 East Main 06608
1972 Schare, George David, 340 Capitol Ave. 06606
1946 Schopick, Louis E., 2090 North Ave. 06604
1954 Sciarrillo, Joseph John, 3354 Main 06606
1947 Scully, Michael Richard, 2970 Main 06606
1938 Sekerak, Richard John, 1400 East Main 06608
1968 Shah, Urmila C., 881 Lafayette 06603
1968 Shanley, Walter Thomas, 4749 Main 06606
1948 Shea, Joseph Patrick, 2660 Main 06606
1972 Sheiman, Robert Aaron, 50 Ridgefield Ave. 06610
1946 Sheiman, Samuel Charles, 1539 Park Ave. 06604
1947 Sherman, Irving J., 2660 Main 06606
1973 Shetty, Sadananda M. B., 50 Ridgefield Ave. 06610
1972 Shimkin, Peter Michael, 50 Ridgefield Ave. 06610
1944 Sholler, Nicholas A., 2148 North Ave. 06604
1971 Silverman, Donald Richard, 50 Ridgefield Ave. 06610
1958 Simkovitz, Jaime, 881 Lafayette 06603
1968 Simpson, John Arthur, 1285 Boston Ave. 06602
1939 Simses, John Peter, 1151 Park Ave. 06604
1950 Small, Alan Robert, 4747 Main 06606
1962 Small, John Howard, 50 Ridgefield Ave. 06610
1963 Sorge, Dominick Vincent, St. Vincent's Hospital 06606
1960 Souvlis, Charalambos D., 881 Lafayette 06603
1971 Stallworth, Vera Martin, 2625 Park Ave. 06604
1971 Steremberg, Zuli, 29 Federal 06606
1949 Stevens, John Sutehall, 1438 Park Ave. 06604
1964 Stiff, David Parker, St., Vincent's Hospital 06606
1973 Stotts, H. Lyle, Bridgeport Hospital 06610
1952 Sullivan, John Lawrence, 50 Ridgefield Ave. 06610
1973 Taubin, Howard Leslie, 114 State 06603
1953 Thurmond, James Ernest, 50 Ridgefield Ave. 06610
1947 Turetsky, Samuel, 2357 Fairfield Ave. 06605
1943 Unger, Milton, 923 East Main 06603
1932 Uvitsky, Irving Harry, 3101 Main 06606
1971 Vallone, Anthony Joseph, 4749 Main 06606
1966 van der Veen, Teunis, Bridgeport Hosp. 06610
1967 Vincent, Norman Robert, 10 Washington Ave. 06604
1941 Vioni, R. Edward, 3450 Main 06606
1955 Walsh, James Francis, III, 2660 Main 06606
1948 Walzer, Eugene Harold, 540 Clinton Ave. 06604
1942 Ward, James P., 881 Lafayette 06603
1951 Wasserman, Edward, 881 Lafayette 06603
1968 Wasson, Dennis, 50 Ridgefield Ave. 06610
1967 Waynik, Cyril, 4697 Main 06606
1971 Weglarz, Stanley S., 50 Ridgefield Ave. 06610
1973 Weinstein, Alan Harvey, 50 Ridgefield Ave. 06610
1965 Weinstein, Albert, 340 Capitol Ave. 06606
1958 Weinstein, Norman, 340 Capitol Ave. 06606
1948 Weise, Ellwood Carl, Jr., 50 Ridgefield Ave. 06610
1946 Williams, Francis Pryor Anthony, Bridgeport Hospital 06610
1973 Yu, Henry Chun-Chiang, 2660 Main 06606
1943 Zsiga, Elmo Douglas, 303 Clinton Ave. 06605

BROOKFIELD 06804

1967 Bowen, Willet Raynor, Route 7
1968 DiGrazia, Paul Vincent, Route 7
1971 Foye, Gerald John, Brookfield Prof. Bldg., Rt. 7
1971 Harwood, Robert Alan, Brookfield Prof. Ctr., Rt. 7
1973 Kayal, Frederick Abraham, Brookfield Prof. Ctr.
1973 Paquette, Richard Robert, Brookfield Prof. Ctr., Rt. 7
1970 Soletsky, Harry B., Brookfield Prof. Ctr.

BROOKFIELD CENTER 06805

1948 Ralston, Richard Marion, Whisconier Hill

COS COB 06807

1940 Bria, William Francis, Diamond Hill
1959 Clayton, James Augustus, Clover Pl.
1965 Garb, Allan E., 49 Dandy Dr.
1963 Koenig, Allen Russell, 78 Dandy Dr.
1952 Murphy, John Philip, 8 Sinaway Rd.
1967 Suerig, Karl Christian, Mimosa Dr.

DANBURY

1964 Albanese, Antonio Nicola, 13 Hospital Ave. 06810
1962 Azar, Marcel A., 111 West 06810
1963 Badan, Bohodar, Danbury Hospital 06810
1963 Balmaseda, Rene Y., Danbury Hospital 06810
1973 Balsam, Stephen J., 92 Locust Ave. 06810
1958 Barese, Angelo Mario, 95 Locust Ave. 06810
1953 Barysh, Noah, 93 West 06810
1973 Berger, David S., 24 Hospital Ave. 06810
1951 Blansfield, Henry Nelson, 46 Federal Rd. 06810
1947 Burnie, George A., 105 Main 06810
1952 Castro, Roger Perez, 136 South 06810
1952 Cherry, Joseph Bentley, 46 Federal Rd. 06812
1965 Chiaramonte, Cajetan Thomas, 1 Padanaram Rd. 06812
1961 Coleman, Paul Joseph, 92 Locust Ave. 06810
1965 Daniels, John C., Danbury Hospital 06810
1959 Dawe, Edwin Lloyd, 8 West 06810
1942 DeKlyn, Ward B., 177 Main 06810
1947 Edson, Dean Harding, 2 Hospital Ave. 06810
1947 Epstein, Benjamin, 8 Locust Ave. 06810
1974 Falkenstein, Ralph Jay, Danbury No. Shopping Center 06810
1967 Fand, Robert, 79½ North 06810
1969 Fegley, Homer B., Danbury Hospital 06810
1963 Fernand, Edwin George, 46 Federal Rd. 06812
1973 Fischl, Robert A., 16 Hospital Ave. 06810
1959 Fornshell, Robert Pearce, 85 Osborne 06810
1931 Gaffney, John James, 215 Main 06810
1931 Genovese, Frank Thomas, 395 Main 06810
1958 Gianfranceschi, Guido Richard, 35 Tamarack Rd. 06812
1972 Glucksman, Myron Lawrence, 92 Locust Ave. 06810
1960 Goldberg, Morley Moses, 84 Locust Ave. 06810
1958 Goldman, Alvin, 84 Locust Ave. 06810
1969 Goldstein, William B., 95 Locust Ave. 06810
1929 Goldys, Frank Max, 209 Main 06810
1957 Greenfield, Michael, Danbury Shopping Center, North 06810
1954 Gryce, Walter I., 30 Hospital Ave. 06810
1960 Herrera, Nilo Ernesto, Danbury Hospital 06810
1973 Hines, Ann Hanahoe, 82 South 06810

1968 Homer, Donald R., Danbury Hospital 06810
1954 Hubbard, Richmond Chase, 59 Main 06810
1957 Jameson, Marjorie Elizabeth, 18 Fairview Ave. 06810
1957 Jameson, Thomas Peter, 18 Fairview Ave. 06810
1953 Jovell, John William, 46 Main 06810
1954 Joy, Robert Chamberlain, 30 Driftway Rd. 06810
1960 Kenter, Ali Mahmut, 46 Federal Rd. 06812
1963 Kilhenny, Charles, 2 Hospital Ave. 06810
1960 Kuczko, Edward Paul, 12 Osborne 06810
1954 Machcinski, Victor Anthony, Danbury Shopping Center 06810
1970 Malloy, Thomas McKevitt, 85 Osborne 06810
1965 Manlapaz, Jesse Schmidt, 70½ West Plaza 06810
1962 Mauks, Charles William, 79 West 06810
1957 McDermott, John Joseph, 54 Main 06810
1958 Miller, Robert George, 70½ West Plaza 06810
1961 Orr, Jack Thomas, Danbury Hospital 06810
1949 Patterson, Harold Calvin, 93 West 06810
1970 Prince, Marvin Lawrence, 16 Hospital Ave. 06810
1972 Raff, Ira L., 113 Deer Hill Ave. 06810
1949 Randolph, Martin Francis, 70 Deer Hill Ave. 06810
1969 Reitwiesner, Andrew George, Danbury Hospital 06810
1937 Rogol, Louis, 11 Dogwood Dr. 06810
1971 Rose, Turpin Harry, 432 Main 06810
1964 Rubin, L. Robert, 84 Locust Ave. 06810
1947 Ruiz, Rolando R., 77 West 06810
1967 Saunders, Francis Peter, 85 Osborne 06810
1958 Schwartz, Raphael David, 92 Locust Ave. 06810
1973 Sellner, Henry Ascher, 84 Locust Ave. 06810
1965 Shafto, William Alan, 18 Fairview Ave. 06810
1970 Sherman, Warren T., 92 Locust Ave. 06810
1958 Silvert, David Sidney, 113B Deerhill Ave. 06812
1965 Simonelli, Joseph Michael, 2 Hospital Ave. 06810
1953 Sinton, William Anthony, 85 Osborne 06810
1951 Sokolski, Edward John, 35 Tamarack Ave. 06812
1958 Staffieri, Salvatore, 116 Main 06810
1972 Taylor, J. Kenneth, 30 Hospital Ave. 06810
1932 Tomaino, Felix Francis, 85 West 06810
1963 Tomaino, Pietro, 44 Davis 06810
1965 Upton, Emily Frances, 17 Jeanette Rd. 06812
1957 Van Syckle, Guy Weaver, 30 Hospital Ave. 06810
1972 Weiner, Jay, 92 Locust Ave., Danbury 06810
1970 Zimmer, Alan E., 95 Locust Ave. 06810
1971 Zolov, David Mitchell, 83 West 06810

DARIEN

1951 Brown, David Arthur, 210 Brookside Rd. 06820
1973 Bull, Marcia B., Dew La. 06820
1964 Dorr, James Richard, 36 Old King's Hwy. South 06820
1964 Franklin, Marshall, 17 Old King's Hwy. South 06820
1955 Gammill, James Flaude, 767 Post Rd. 06820
1960 Harness, John Henry, 2701 Boston Post Rd., 06820
1969 Harrell, Samuel Ronald, 17 Old King's Hwy. South 06820
1954 Hughes, George Stevenson, 10 Nickerson La. 06820
1953 Kavookjian, Haik, Jr., 62 Stanton Rd. 06823
1968 Krauthamer, Martin Joel, 17 Old King's Hwy. South 06820
1962 Kremer, Carl Peter, Jr., 8 Ring's End Rd 06822
1955 Macgregor, James Verry, 2 Queens La. 06820
1954 McGarry, John Joseph, 36 Old King's Hwy. South 06820
1956 Ralph, Fenn T., P. O. Box 1162 06820
1966 Schoenwald, Herman R., 298 Brookside Rd. 06820
1960 Squattrito, Umberto, 17 Old King's Hwy. South 06820
1971 Tobin, John Joseph, 17 Old King's Hwy. South 06820

EAST NORWALK 06855

1938 Corridon, James Donald, 194 East Ave.
1954 Csovanyos, Laszlo, 200 East Ave.
1973 Dalal, Bharat Jayant, 108 East Ave.
1948 Ippolito, Thomas Leonard, Pine Hill Ave.

EASTON 06425

1951 Chick, Forris Beechan, 171 Sport Hill Rd.
1974 Kim, Yu Hong, Ferndale Rd.
1957 Knauff, Edward Franklyn, 166 Sport Hill Rd.
1966 O'Neil, Thomas Joseph, 52 Hall Rd.
1952 Ryan, James Edward, 750 Sport Hill Rd.
1935 Smith, Joseph Jacob, 394 Sport Hill Rd.

FAIRFIELD

1963 Axiotis, Anthony Hippocrates, 71 Beach Rd. 06430
1944 Barker, Daniel C., 133 Reef Rd. 06430
1939 Biehn, Donald M. Frick, 47 Parkway 06430
1963 Blum, Lawrence Michael, 325 Reef Rd. 06430
1940 Castaldo, Louis F., 325 Reef Rd. 06430
1973 Chumnanvech, Nongnuch L., P.O. Box 1172
1967 Clift, George Vincent, 325 Reef Rd. 06430
1973 Cohen, Ivan S., 1224 Post Rd. 06430
1973 Cohen, William B., 1305 Post Rd. 06430
1969 Coolidge, Melvin P., 1305 Post Rd. 06430
1973 D'Apice, Joseph Patrick, 545 Mill Plain Rd. 06430
1921 DeWitt, Edward Nicholas, 3129 Burr 06432
1949 Edwards, Larry Edwin, 1410 Mill Plain Rd. 06430
1957 Flom, Leonard, 1700 Post Rd. 06430
1953 Gaffney, Robert Edward, 325 Reef Rd. 06430
1959 Gardner, Charles Wesley, Jr., 100 Verna Hill Rd. 06431
1950 Gardner, Sidney M., 172 Curtis Ter. 06604
1954 Garrell, Marvin, 60 Katona Dr. 06430
1968 Gaynes, Philip Martin, 1700 Post Rd. 06430
1971 Grossman, Edward T., 1305 Post Rd. 06430
1968 Hankin, Edwin, 1305 Post Rd. 06430
1944 Harris, H. Patterson, Jr., Town Hall 06430
1972 Herbin, Joseph Thomas, 60 Katona Dr. 06430
1963 Higgins, Kenneth Elliot, 325 Reef Rd. 06430
1973 Hobbie, Robert J., 400 Stillson Rd. 06430
1959 Hoffman, William Albert, 1305 Post Rd. 06430
1957 Jonas, Gordon Quincy, 1700 Post Rd. 06430
1943 Jones, Elwood King, 20 Old Barn Rd. 06430
1947 Joslin, Stuart L., 1305 Post Rd. 06430
1971 Kapp, Philip A., Box 1172 06430
1973 Katz, Stephen R., 1700 Post Rd. 06430
1948 Kaufman, Maurice, 94 Golf View Ter. 06430
1973 Kelly, George Philip, 1193 Stratfield Rd. 06430
1948 Kemp, Edward P., 178 Reef Rd. 06430
1972 Kiss, George Thomas, 1240 Post Rd. 06430
1924 Kneale, Halford Benson, 239 Toilsome Hill Rd. 06604
1972 Lee, Michael Alan, 1172 Post Rd. 06430
1973 Leighton, Robert Leslie, 1305 Post Rd. 06430
1955 Lenci, Thomas Dexter, 325 Reef Rd. 06430
1973 Lintz, Edward M., 325 Reef Rd. 06430
1931 Lockhart, R. Harold, 37 Verna Field Rd. 06431
1950 McCreery, Edward Prince, 325 Reef Rd. 06430
1949 Messinger, Henry J., 1597 Post Rd. 06430
1973 Molloy, Edward Michael, 1735 Post Rd. 06430
1945 Morgan, Kenneth Remsen, 325 Reef Rd. 06430
1971 Morrison, Murray Allan, 325 Reef Rd. 06430

1973 Moses, John Austin, 30 Kalan Circle 06430
1954 Moss, Albert Murray, 38 Meadow Court Dr. 06604
1953 Nevins, Robert Allan, 325 Reef Rd. 06430
1974 O'Rourke, George Ward, 1838 Black Rock Tpke. 06430
1962 Pearlstone, Arnold David, 1700 Post Rd. 06430
1960 Pendagast, Edward Leslie, Jr., Burr, R.F.D. No. 1 06430
1963 Ramirez, Luis Manuel, 635 Stratfield Rd. 06604
1957 Rhame, Harold Ellis, Jr., 325 Reef Rd. 06430
1959 Rogowski, John Peter, 137 Whiting Pond Rd. 06432
1957 Sires, William Oscar, 1506 Post Rd. 06430
1952 Smolen, Elwyn Milton, 1177 Post Rd. 06430
1973 Smolen, Ruth L., 1177 Post Rd. 06430
1951 Spencer, Samuel, 190 Curtis Ter. 06432
1965 Stathacos, Eustace James, 1951 Congress 06432
1953 Stubenhaus, Jay H., 23 Sherman 06430
1925 Tolk, Nathan Robert, 157 Toilsome Hill Rd. 06604
1973 Truchly, George, 325 Reef Rd. 06430
1971 Twersky, Joshua Moses, 400 Stillson Rd. 06432
1964 Van de Berghe, Richard L., 325 Reef Rd. 06430
1967 Weicholz, Sheldon, 675 Fairfield Woods Rd. 06432
1954 Williams, Charles Rockwell, 325 Reef Rd. 06430
1968 Woods, Charles Alexander, 400 Stillson Rd. 06432

NEW FAIRFIELD 06815

1971 Dwyer, Thomas Aquinas, Candlewood Corners

GLENBROOK 06906

1964 Nadel, Hyman, 397 Courtland Ave.

GEORGETOWN 06829

1974 Goldberg, Arnold H., P.O. Box 455

GREENWICH

1939 Anderson, Clifton Winthrop, 153 Mason 06830
1955 Arturi, Peter Adolph, 71 Old Church Rd. 06830
1940 Ayres, Payson Bryan, 4 Dearfield Dr. 06832
1969 Bachner, Paul, Greenwich Hospital 06830
1974 Banyard, Richard David, 4 Dearfield Dr. 06832
1949 Beaty, John Thurston, 49 Lake Ave. 06830
1954 Beek, Edith Marie, 56 Lafayette Pl. 06830
1963 Benninghoff, Daniel William, Greenwich Hospital 06830
1972 Bernene, James Louis, 1 Perryridge Rd. 06830
1957 Bisceglia, Joseph Gregory, 49 Lake Ave. 06830
1949 Blossom, Dudley Buck, Pheasant Lane 06833
1968 Bogdan, Peter E., 49 Lake Ave. 06830
1948 Bolton, John Dewey, 49 Lake Ave. 06830
1950 Bonnett, Dovell Nicholas, 20 Dayton Ave. 06830
1965 Branom, Wayne Thurman, Jr., 49 Lake Ave. 06830
1966 Camp, Walter Atwood, 49 Lake Ave., 06830
1969 Campbell, Milton Flake, Dearfield Dr. 06832
1952 Christie, Frederick John, Greenwich Hospital 06830
1974 Coomaraswamy, Rama P., 4 Dearfield Dr. 06832
1970 Crisafi, Bartel Robert, 49 Lake Ave. 06830
1954 Dale, Paul Worthen, 38 Lake Ave. 06830
1973 Danehower, Richard Lloyd, 49 Lake Ave. 06830
1944 Davol, Rector Thomson, 49 Lake Ave. 06830
1950 Dean, Peter Michael, 49 Lake Ave. 06830
1950 deCholnoky, Tibor, 40 West Elm 06833
1952 Delany, Forbes, 4 Dearfield Dr. 06832
1947 Derkash, Stephen L., Rockwood Lane Spur 06830
1959 Doering, Eckart George, 4 Dearfield Dr. 06832
1968 Dudley, James Patrick, 3 Putnam Hill 06830
1951 Finn, Frederick Wall, 4 Dearfield Dr. 06832
1948 Fogel, David Hudson, 60 Putnam Park 06830
1973 Frank, Ross Delano, Ituri Towers 06830
1972 Gallo, Gary Anthony, 20 Dayton Ave. 06830
1952 Gerster, John Wynne, 4 Dearfield Dr. 06832
1961 Hampton, William Hately, 38 Lake Ave. 06830
1973 Hands, Robert Adrian, Jr., 36 Sherwood Pl. 06830
1973 Hardy, Robert E., 1 Perryridge Rd. 06830
1968 Haskins, Donald Miller, Greenwich Plaza 06830
1968 Healey, William Vincent, 49 Lake Ave. 06830
1960 Hecklau, Edmund Frederick, 42 Sherwood Pl. 06830
1973 Hemley, Samuel David, 49 Lake Ave. 06830
1963 Hillis, William, 4 Dearfield Dr. 06832
1950 Hoffman, J. Brooks, Perryridge Rd. 06830
1949 Howorth, Beckett, 49 Lake Ave. 06830
1965 Innes, James Walker, 1 Perryridge Rd. 06830
1959 Jensen, Philip Bailey, 3 Calhoun Dr. 06830
1971 Kauer, George L., Jr., American Lane 06830
1959 Keller, Norman Wolf, 49 Lake Ave. 06830
1949 Kent, Edwin Head, 183 East Putnam Ave. 06830
1967 Knapp, Richard Bruce, Stanwich Rd. 06830
1972 Kopeloff, Nicholas, 4 Dearfield Dr. 06830
1970 Kraus, George, Town Hall Annex 06830
1953 Langan, Michael Joseph, 4 Dearfield Dr. 06832
1964 Larkin, John I., 42 Sherwood Pl. 06830
1950 Lee, John Frederick, 20 Dayton Ave. 06830
1969 Lightbody, Forrest E. H., Greenwich Hospital Association 06830
1972 Maher, Peter Harvey, 56 Lafayette Pl. 06830
1962 Mann, Warren A., 49 Lake Ave. 06830
1974 Marcus, Henriette, Hunting Ridge Rd. 06830
1973 Marino, A. Michael, Greenwich Hospital 06830
1950 Markley, Henry Eugene, 49 Lake Ave. 06830
1962 McDonagh, Patrick Henry, 18 Mayo Ave. 06830
1953 McKendree, Charles G., Greenwich Hospital Association 06830
1963 Melmed, Ronald Martin, 38 Lake Ave. 06830
1954 Millard, Donald Henry, 4 Dearfield Dr. 06832
1959 Montimurro, Joseph Anthony, 49 Lake Ave. 06830
1962 Morley, David Clark, 6 Meadow Dr., 06830
1971 Murphy, Joseph M., Greenwich Hospital Association 06830
1948 Murray, John Gregg, Greenwich Hospital 06830
1970 Newberg, Marc E., 49 Lake Ave. 06830
1972 Newman, Robert David, Greenwich Hospital 06830
1971 Nicholl, (D.O.) Robert G., 221 Milbank Ave. 06830
1955 Nolan, Timothy Francis, 49 Lake Ave. 06830
1973 Orphanos, James Peter, 23 Maple Ave. 06830
1962 Patterson, Marjorie Butts, 4 Dearfield Dr. 06832
1961 Prangley, Arthur George, Jr., 4 Dearfield Dr. 06832
1964 Prunier, John Henry, 49 Lake Ave. 06830
1972 Reber, Robert Eugene, 4 Dearfield Dr. 06830
1968 Redmond, Anthony Pierce, 49 Lake Ave. 06830
1968 Rodda, Thomas Douglas, 49 Lake Ave. 06830
1966 Rosenberg, Arthur H., 42 Sherwood Pl. 06830
1946 Rourke, Thomas Alfred, 88 Milbank Ave. 06830
1968 Salerno, Silvio Aniello, Greenwich Hospital 06830
1953 Schwimmer, Robert, 49 Lake Ave. 06830
1938 Serrell, Howard P., Round Hill Rd. 06833
1973 Shanahan, Sheila Ann, 20 Dayton Ave. 06830
1970 Spencer, James Alexander Erskine, Greenwich Hospital 06830
1940 Swarts, William B., Warwick Towers 06830
1939 Tunick, George L., 675 Steamboat Rd., 06830
1972 Ubogy, George A., 4 Dearfield Dr. 06830
1958 von Gal, Herbert Vreeland, 4 Dearfield Dr. 06832
1942 Weber, Frederick Clarence, Jr., 185 Putnam Park 06830
1953 Wheeler, Robert Channing, Greenwich Hospital 06830
1955 Wilsey, John Colver, 4 Dearfield Dr. 06832

1973 Wilson, James Ronald, Jr., 2 Glenville Rd. 06830
1969 Wood, James William, 1 Perryridge Rd. 06830
1968 Worcester, James N., Jr., 20 Dayton Ave. 06830
1947 Wright, Harold S., Ituri Towers 06830
1949 Wyatt, Robert Harry, 1 Perryridge Rd. 06830
1973 Yerg, Raymond A., American Can Co. 06830

MONROE 06468

1961 Garrity, James David, Elm
1969 Light, Claude F., 494 Main

NEW CANAAN 06840

1937 Abrahams, Meyer, 1 Colonial Court
1964 Benton, Arnold Jerome, Silver Hill Foundation
1952 Brown, Charlotte Rush, Valley Rd.
1951 Brown, David Seeley, 173 East Ave.
1965 Chachkes, Jacob Trister, 194 South Ave.
1941 Cody, Thomas Patrick, 241 Main
1956 Crary, Horace Ingraham, 173 East Ave.
1954 Crown, Charles Augustus, 194 South Ave.
1960 Eckhardt, William Francis, Jr., 173 East Ave.
1965 Flynn, Thomas Garrett, 138 East
1973 Gordon, I. Bruce, 173 East Ave.
1941 Hebard, George Whiting, 303 Elm
1945 Hiden, Robert Battaile, Silver Hill
1972 Katis, James George, Silver Hill Foundation
1973 Marcus, Lawrence I., Silver Hill Foundation
1971 Moore, Morgan Francis, 89 Hickok Rd.
1965 Neumann, Charles Pilgrim, Silver Hill
1952 Pullen, Edward Markey, 242 Wahackme Rd.
1949 Rem, Edward A., 73 Comstock Hill Rd.
1958 Rutherford, James Woodson, 162 East Ave.
1973 Schuster, Carlotta Lief, Silver Hill Foundation
1967 Shutkin, Peter Michael, 173 East Ave.
1935 Terhune, William Barclay, 252 Valley Rd.

NEWTOWN 06470

1972 Annunziata, Vincent, R.D. No. 3, 6 Patricia La.
1973 Bauta, Humberto Pedro, Danbury-Newtown Rd.
1968 Borrelli, Anthony Paul, Danbury-Newtown Rd.
1970 Craven, Raymond Orvin, Danbury-Newtown Rd.
1962 Draper, Thomas F., Deep Brook Rd.
1937 Egee, J. Benton, 36 Currituck Rd.
1970 Evans, Donald Thomas, 43 South Main
1960 Grossman, Robert S., P.O. Box 426
1970 Kotch, Philip Irwin, P.O. Box 426
1966 Meehan, Bernard Joseph, Danbury-Newtown Rd.
1965 Miller, Robert Bernhardt, Fairfield Hills, Hospital
1962 Petruschow, Anatol, Fairfield Hills Hospital
1959 Rhinehart, John Woodward, 46 West
1974 Saperstein, Stanley, 43 South Main
1968 Thomas, Douglas Wyndham, 43 South Main
1973 Townsend, Gray L., Danbury-Newtown Rd.

NOROTON 06820

1961 Fuoco, Louis A., 39 Fitch Ave.

NORWALK

1972 Ahmed, Ezzeldin H. S., 114 East Ave. 06851
1941 Aiello, Louis James, 394 West Ave. 06850
1950 Allen, Benjamin Israel, 13 Park 06851
1969 Auerbach, Neil, 149 East Ave. 06851
1963 Barton, Jerome, 10 Mott Ave. 06850
1942 Bradley, E. Tremain, 31 Stevens and 32 Elm, New Canaan 06840
1955 Bradley, Harry Abner, Jr., Richards Ave. 06850
1969 Brody, David Michael, 10 Mott Ave. 06850
1964 Brovender, Arthur, 10 River 06850
1963 Brovender, Stanley, 7 June Bar Lane 06851
1973 Brown, Harry J., 69 East Ave. 06851
1958 Burke, Albert Vincent, 195 East Ave. 06851
1973 Chan, Daniel W., 108 East Ave. 06851
1973 Chapnick, Girard A., 153 East Ave. 06851
1973 Chu, Clifford Chiu-Chi, 108 East Ave 06851
1965 Corey, Joseph Michael, 53 East Ave. 06851
1945 Corwin, Daniel Bernard, 49 East Ave. 06851
1952 Corwin, Henry Richard, 13 Park 06851
1965 Cronin, William Timothy, 395 West Ave. 06850
1958 Dearani, Abraham Charles, 195 East Ave. 06851
1937 Diamond, Edward H., 71 East Ave. 06851
1959 DiCorato, Frank, 10 Mott Ave. 06850
1954 Dwyer, Gregory Kennedy, 5 Elmcrest Ter. 06850
1966 Fabrizio, Tuula I. J., 15 Highwood Ave. 06850
1953 Falsone, Jack Joseph, 147 East Ave. 06851
1951 Felder, Edward Arnold, Norwalk Hospital 06850
1940 Fitzpatrick, Wesley Fenton, 85 East Ave. 06851
1963 Floch, Martin Herbert, 24 Stevens 06856
1951 Flynn, Edward John, 10 Mott Ave. 06850
1946 Gens, John Paul, 153 East Ave. 06851
1947 Genvert, Harold, 5 Elmcrest Ter. 06850
1963 Georgakis, Nicholas, 71 East Ave. 06851 and 230 Danbury Rd., Ridgefield
1955 Giardina, David Diego, 394 West Ave. 06850
1938 Giuliano, Louis Augustine, 111 East Ave. 06851
1949 Gloetzner, Henry James, 71 East Ave. 06851
1959 Goodman, Stanley Erwin, 160 East Ave. 06851
1938 Gorham, Grace Viola, 64 Wall 06850
1955 Griffith, James Joseph, 83 East Ave. 06851
1963 Grossman, Bertram Howard, 153 East Ave. 06851
1974 Hedley, Gerald E., 48 Stevens 06850
1959 Herman, Eugene B., 520 West Ave. 06850
1968 Hermann, Jens H., 166 East Ave. 06851
1973 Jee, Kwang Soo, Fullmar La. 06850
1951 Jones, Martling Barnet, 197 East Ave. 06855
1949 Kalaman, Francis J., 137 East Ave. 06851
1973 Kaye, Roger Henry, 5 Elmcrest Terr. 06850
1966 Klein, Jerome Joshua, 83 East 06851
1974 Koehler, Paul Burrell, 50 Washington 06856
1970 Kramer, Theodore, 10 Mott Ave. 06850
1970 Littman, Edward, 83 East Ave. 06851
1953 Lovekin, Louise Gout, 10 Mott Ave. 06850
1949 Lyons, Benjamin Ephraim, 10 Mott Ave. 06850
1968 Maloney, Paul Keating, Jr., 12 Elmcrest Ter. 06850
1948 Margold, Allen Montague, 148 East Ave. 06851
1952 Marinucci, Edmund Dominic, 108 East Ave. 06851
1964 McCaul, Kevin Francis, 10 Mott Ave. 06850
1962 Mendoza, Ruben, 15 Belden Ave. 06850
1963 Meno, George Peter, 108 East Ave. 06851
1965 Merdinolu, Murat Arthur, 152 East Ave. 06851
1946 Mills, Clifford Wheeler, 65 East Ave. 06851
1951 Minor, James Vincent, Jr., 10 Mott Ave. 06850
1961 Minot, Henry Davis, 5 Elmcrest Ter. 06850
1951 Mulford, Edwin H., II, 5 Elmcrest Ter. 06850
1960 Nair, Sreedhar, Carriage Dr. 06850
1951 Norrington, Eric George, 153 East Ave. 06851 and 1 Avery Pl., Westport 06880
1938 Northrop, Robert Arthur, 2 Park 06851
1973 Novack, Stuart Neil, 83 East Ave. 06851
1960 Orlins, Melvin David, Studio Lane 06850
1953 Ormand, Joseph, 153 East Ave. 06851
1970 Orr, Harry Dawson, Jr., P.O. Box 936 06852
1967 Osborn, Dickson, 153 East Ave. 06851
1938 Padula, Ralph Domenick, 84 West Ave. 06850
1942 Paul, Francis, 64 Wall 06850
1963 Piro, John Frank, 53 East Ave. 06851
1973 Pool, John L., 24 Stevens 06856
1949 Richman, Daniel Powell, 111 East Ave. 06851
1955 Rogers, William Joseph, 10 Mott Ave. 06850
1963 Sacco, John Joseph, 85 East Ave. 06851

1966 Schulman, Paul L., 83 East Ave. 06851
1972 Schwartz, Paul Edward, 83 East Ave. 06851
1947 Serena, Frank A., 158 East Ave. 06851
1946 Serena, John Mario, 27 Bettswood Rd. 06851
1931 Simon, Louis G., 212 New Canaan Ave. 06850
1968 Singer, Bernard, 104 East Ave. 06851
1972 Singer, Joel Barnett, 153 East Ave. 06851
1950 Skluth, L. Herbert, 87 East Ave. 06851
1963 Stabinsky, Charles, 152 East Ave. 06851
1943 Steinberger, Laszlo, 166 East Ave. 06851
1974 Stember, Rishon H., 111 East Ave. 06851
1937 Stietzel, Eric Ernst, 153 East Ave. 06851
1952 Strong, St. Clair Grant, 10 Mott Ave. 06850
1962 Sullivan, William Michael 83 East Ave. 06851
1965 Tager, Michael George, 12 Elmcrest Ter. 06850
1966 Tracey, Edward J., 153 East Ave. 06851
1971 Tracey, James Patrick, 124 East Ave. 06851
1952 Trambert, Harry L., 150 East Ave. 06851
1968 Truax, Hollis Norman, Norwalk Hospital 06856
1953 Vetter, Ignatius Joseph, 5 Elmcrest Ter. 06850
1971 Vigna, Vincenzo, 108 East Ave. 06851
1958 Walker, Harold Clifford, 10 Mott Ave. 06850
1971 Weinstein, Arnold H., 10 Mott Ave. 06850
1938 Weinstein, Nathan, 108 East Ave. 06851
1958 Wexler, Richard, 166 East Ave. 06851
1968 Williams, Shirley Yvonne, 10 Brush 06850
1971 Zusman, Howard Eugene, Norwalk Hospital 06856

OLD GREENWICH 06870

1973 Blumberg, Joel Myron, 8 West End Ave.
1950 Brock, Warren Heath, 311 Sound Beach Ave.
1967 Gray, Charles Helman, 4 Cove Ridge Lane
1972 Lewis, Stephen H., 8 West End Ave.
1973 Nemec, Jutta Magnus, 1 Heusted Dr.
1973 Rein, Joel M., 8 West End Ave.
1959 Schmitt, Daniel, 8 West End Ave.
1963 Siefert, Frederick Edward, 8 West End Ave.

RIDGEFIELD 06877

1929 Amos, Isadore Louis, 239 Limestone Rd.
1967 Buchman, Joseph Gilbert, 17 Governor
1974 Chambers, C. Frank, 900 Ethan Allen Highway
1931 Fiske, Madeline, P.O. Box 64
1966 Guigui, Armand, 900 Ethan Allen Highway
1972 Katis, Lauma U., Old West Mountain Rd.
1951 Safford, Theodore, Jr., 69 Main
1962 Sheehan, James Ennis, 484 Main
1969 Spence, James Kindel, 5½ Bailey Ave.
1957 Van Poznak, Frederick, 642 Danbury Rd.
1927 Woodford, Francis Bowditch, 325 Main

RIVERSIDE 06878

1967 Kelly, J. Colman, 30 Bonwit Rd.
1939 Read, Francis Arnold, 10 Crescent Rd.

ROWAYTON 06853

1938 Hunkemeier, Edna, 1 Nylked Ter., Pine Point
1948 Levine, Abraham I., 26 Wilson Ave.
1956 Rose, Gilbert Jacob, 25 Sammis

SANDY HOOK 06482

1947 Kyle, George Byron, Glen Rd.

SHELTON

1960 Berger, Alexander, 32 Huntington 06486
1949 Hansen, Wilbur Henry, 200 Huntington 06484
1956 Klimas, Francis Alexander, 15 Judson Circle
1941 Pagliaro, Joseph John, 405 Coram Ave. 06484

SOUTH NORWALK 06854

1946 Burack, Jason Oliver, 20 North Main

SOUTHPORT 06490

1935 Antell, Maxwell Joseph, 64 Southport Woods Dr.
1957 D'Elia, Frank G., 252 Main
1939 Hardenbergh, Daniel Bailey, 101 Harbor Rd.
1949 Kueffner, William Robert, 99 Harbor Rd.
1953 Reinhard, Warren John, 311 Pequot Ave.
1961 Scholan, Francis James, 99 Harbor Rd.
1947 Sterrett, Raymond A., 115 Main

SPRINGDALE 06879

1940 Crane, James Everett, 1186 Hope
1949 Savak, Joseph Ernest, 743 Hope

STAMFORD

1946 Abrahamson, Robert Henry, High Valley Way 06903
1961 Allard, Gilles Guy, St. Joseph's Hospital 06902
1956 Banfield, Richard Sterling, Jr., 144 Morgan 06905
1936 Bannon, Frederick Michael, 300 Main 06901
1954 Bellwin, Alexander, 144 Morgan 06905
1968 Benjamin, Burton Irving, 19 Third 06902
1954 Benjamin, Martin Robert, 1425 Bedford 06905
1965 Bessa, Octavio, Jr., 1380 Bedford 06905
1973 Bockar, Joyce A., 146 Shadow Ridge Rd. 06905
1957 Borowy, John Edward, 1380 Bedford 06905
1965 Branham, Henry Ezell, Jr., 1116 Summer 06905
1971 Braun, Ronald Walter, 133 MacGregor Dr. 06902
1954 Breakell, Edward Samuel, Stamford Hospital 06902
1967 Browne, Francis Joseph, 1425 Bedford 06905
1961 Browne, Michael Alexander, 1425 Bedford 06905
1961 Browning, Louis D., Jr., 83 Morgan 06905
1971 Bujdud, Christian M., 965 Hope 06906
1969 Bull, Sherman Marsh, 70 Mill River 06902
1951 Bullen, Halsey Graves, 21 Broad 06901
1969 Bullwinkel, George Albert, Jr., 70 Mill River 06902
1973 Carino, John Maurice, 47 Oak 06905
1944 Cassone, Rocco, 10 River 06901
1966 Chamberlin, Allen Chapin, 144 Morgan 06905
1950 Cloonan, John Joseph, 95 Morgan 06905
1946 Colburn, Russell Fitch, 1416 Bedford 06905
1954 Coleman, Monroe, 144 Morgan 06905
1940 Connolly, Joseph Patrick, 193 Davenport Dr. 06902
1969 Cottle, Robert D., 125 Strawberry Hill Ave. 06902
1961 Coughlin, Francis Raymond, Jr., 144 Morgan 06905
1962 Danoff, Stuart Jay, 1867 Summer 06905
1973 Deutchman, Ralph Floyd, 47 Oak 06905
1968 Dombrowski, Edwin Henry, 95 Morgan 06905
1974 Doyle, Kevin Aidan, 82 Forest 06902
1973 Dreyer, Neil Paul, 19 Third 06902
1968 Echental, Arthur A., 98 Hoyt 06905
1973 Elder, William John, 1200 Bedford 06905
1956 Eliasoph, James Lee, 70 Mill River 06902
1956 Eliasoph, Joan, 112 Hoyt 06905
1955 Eng, Gunnar Orville, 83 Morgan 06905
1951 Epstein, Ezra Jacob, 1100 Bedford 06905
1959 Erdelyi, Paul Gedeon, 132 Hope 06906
1973 Erichson, Robert B., 98 Hoyt 06905
1952 Fakkel, Marie Josephine, 122 Hoyt 06905
1954 Farrell, Jean Elizabeth, 77 Bedford 06902
1950 Farrell, Richard Francis, 35 Hoyt 06905
1933 Fincke, C. Louis, 21 Broad 06901
1937 Fine, Barnet, 70 Grove 06902
1936 Fine, Joseph, 55 Forest Rd. 06902

1962 Fisher, Lloyd Chaim, 31 Strawberry Hill Ave. 06902
1971 Fleming, Richard Joseph, Shelburne & W. Broad 06902
1958 Fogelman, Henry, 69 Forest 06902
1969 Fox, Martin, 1425 Bedford 06905
1931 Gandy, R. Alfred, East La. 06905
1953 Geer, Enos Throop, 144 Morgan 06905
1931 Giles, Newell Walton, 1 Atlantic 06901
1964 Gofstein, Ralph M., 235 Den Rd. 06903
1953 Golbey, Robert Bruce, 1424 High Ridge Rd. 06903
1974 Gold, Leonard, 1425 Bedford 06905
1974 Goldberg, Paul Aaron, 125 Strawberry Hill Ave. 06902
1954 Goldfarb, Jerry, 19 Third 06902
1949 Goldfarb, Simon L., 1435 Bedford 06902
1965 Goodhue, Peter Ames, 70 Mill River 06902
1968 Grann, Victor Robert, 98 Hoyt 06905
1970 Gray, Parke Hanswood, 70 Mill River 06902
1974 Griffiths, Helen Lorraine, 1 Atlantic 06902
1962 Gromults, Joseph Michael, Jr., 125 Strawberry Hill Ave. 06902
1947 Haine, John W., 83 Morgan 06905
1972 Hansen, Carlos Enrique, 1799 Summer 06902
1955 Harrison, Arthur M., 1100 Bedford 06905
1967 Hassan, Kamal Aly, 1425 Bedford 06905
1972 Hecht, Harvey Leon, Stamford Hospital 06902
1974 Hicks, George William, 125 Strawberry Hill Ave. 06902
1955 Izzo, Patrick Anthony, 21 Broad 06901
1944 Jaiven, Saul Joseph, 21 Bridge 06905
1952 Jarvik, Norman Eugene, 44 Strawberry Hill Ave. 06902
1956 Kanter, Donald Morton, 31 Strawberry Hill Ave. 06902
1965 Karas, Lewis Maxwell, 19 Third 06902
1956 Kardos, Joseph Anthony, 860 Stillwater Rd. 06902
1964 Keddy, Russell Alfred, 77 Prospect, Apt. 4D 06902
1955 Keller, Louis, 554 Bedford 06902
1951 Kemp, Walter Wyckoff, 21 Broad 06901
1957 King, Stewart Alan, 70 Mill River 06902
1947 Klein, Harold T., 33 Forest 06902
1969 Klein, Neil Charles, 31 Strawberry Hill Ave. 06902
1939 Koffler, Arthur, 39 Glenbrook Rd. 06902
1970 Krasnogor, Lester Jay, Stamford Hospital 06902
1959 Kraut, Herbert Leon, 47 Oak 06905
1952 LaCorte, Salvatore, St. Joseph's Hospital 06902
1965 LaForte, Peter, 70 Mill River 06902
1973 Lebowitz, Alan I., 31 Strawberry Hill Ave. 06902
1951 Levine, Harry Philip, 828 High Ridge Rd. 06905
1951 Levine, Julian, 23 Hoyt 06905
1968 Lundberg, Einar Albin, 1937 West Main 06904
1961 Madison, Robert Louis, 27 Strawberry Hill Ave. 06902
1953 Magida, Melville Gerson, 31 Strawberry Hill Ave. 06902
1934 Malloy, Edward Francis, 90 Hubbard Ave. 06905
1948 Mancinelli, M. Joseph, Revonah Woods 06905
1968 Manimbo, Sergio G., 41 Rock Spring Rd. 06906
1946 Mastrangelo, Angelo, Jr., 19 Grandview Ave. 06905
1933 McFarland, Frederick William,1425 Bedford 06905
1948 McIntyre, Frederick Powers, 23 Hoyt 06905
1968 McKee, David Rice, 144 Morgan 06905
1953 McNerney, John Cornelius, 111 Four Brooks Dr. 06903
1947 Meacham, Charles Thomas, 1911 Summer 06905
1946 Miller, Hugh Kennedy, 70 Mill River 06902
1955 Morgan, Laura Grey, 21 Bridge 06905
1949 Moriarty, James Patrick, 23 Hoyt 06905
1970 Mostel, Arthur P., 27 Strawberry Hill Ave. 06902
1949 Moulyn, Adrian C., 63 Palmer's Hill Rd. 06902
1972 Mujeeb, Mohamed, 8 Weil 06905
1947 Mulaire, Victor J., 1010 Washington Blvd. 06902
1970 Nagle, John A., 23 Hoyt 06905
1940 Nemoitin, Bernard Oscar, 96 Main 06901
1973 Niell, Jose Pedro, 25 Third 06902
1952 Nolan, John Joseph, 95 Morgan 06905
1946 Ogilvie, John Black, 95 Morgan 06905
1962 Orth, Robert Heyde, 47 Oak 06905
1957 Ostriker, Marilyn, 144 Morgan 06905
1955 Ostriker, Paul J., 144 Morgan 06905
1970 Ozcomert, Sedat, 555 Newfield Ave. 06906
1963 Pesiri, Ralph Anthony, 1729 Bedford 06905
1946 Poczabut, John Stephen, 23 Hoyt 06905
1970 Prokop, James Donald, 83 Morgan 06905
1948 Raffaele, Frank Joseph, 159 Main 06901
1969 Rainville, Thomas Joseph, 1867 Summer 06905
1973 Rapoport, Alan M., 125 Strawberry Hill Ave. 06902
1938 Rawls, Cotton, 300 Main 06901
1969 Resnick, Jerome S., 125 Strawberry Hill Ave. 06902
1929 Resnik, William Harry, 27 Fox Hill Rd. 06903
1954 Richar, Walter John, 22 Beach View Dr. 06902
1960 Ridgway, Walter Stevens, 70 Mill River 06902
1942 Robison, Roy Calvin, 95 Morgan 06905
1951 Rogers, James Forbes, 70 Mill River 06902
1966 Rogers, Martin C., 28 Haviland Rd. 06903
1951 Rosenberg, Bernard L., 144 Morgan 06905
1953 Rosenberg, Charles H., 810 Bedford 06905
1951 Ryan, John Joseph, 172 North 06902
1951 Ryan, William Arthur, 1729 Bedford 06905
1962 Santagata, Pasquale William, 78 West Hill Circle 06902
1964 Sava, Gerard Anthony, 70 Mill River 06902
1957 Savitsky, Elias, 47 Oak 06905
1972 Schneidau, Peter Blair, Stamford Hospital 06902
1970 Schwartz, Arnold Jay, Stamford Hospital 06902
1949 Sheard, Charles, 76 Glenbrook Rd. 06902
1973 Sheftell, Fred D., 500 Newfield Ave. 06905
1938 Sherman, Saul Harvey, 27 Bridge 06905
1969 Sherrington, Harold Jaime, 555 Newfield Ave. 06905
1960 Siderides, Cleo I., Stamford Hospital 06902
1958 Siderides, Lambros E., 1100 Bedford 06905
1950 Slater, Gertrude, 1675 Bedford 06905
1962 Smeraldi, Richard Anthony, 44 Strawberry Hill Ave. 06902
1945 Smith, Leo Michael, Stamford Hospital 06902
1942 Stankard, William Francis, 51 Hartcroft Rd. 06902
1959 Steglich, Carl Peter, 190 West Broad 06902
1965 Steinberg, David Herman, 95 Morgan 06905
1962 Steller, Robert Eugene, 95 Morgan 06905
1965 Strauch, Gerald Otto, 70 Mill River 06902
1961 Sullivan, John Joseph, Jr., 144 Morgan 06905
1967 Suttenfield, Virginia, 500 Wire Mill Rd. 06903
1949 Svedlow, Bernard Dave, 1767 Summer 06905
1960 Telfeian, Artin, 50 Glenbrook Rd. 06902
1950 Tella, Ralph Thomas, 107 Glenbrook Rd. 06902
1958 Trent, Joe Watson, Westover Park 06902
1940 Troy, William Daniel, 140 Hoyt 06905
1967 Usman, Ahmed, 29 Hoyt 06905
1970 Vinnick, Leonard, 1100 Bedford 06905
1968 Voss, Howard Evan, 144 Morgan 06905
1966 Walsh, Thomas Joseph, 1100 Bedford 06905
1957 Waxberg, Joseph David, 65 Prospect 06902
1953 Weed, Clayton Bagslaw, 37 Glenbrook Rd. 06902
1969 Weisel, Alan, 47 Oak 06905
1967 Widrow, David Richard, 1425 Bedford 06905

1952 Williams, Frederick Davis, 1 Atlantic 06901
1956 Wilson, John Marion, Jr., 144 Morgan 06905
1972 Winterhalter, Charles McNeill, Olin Corporation 06902
1961 Wolfsohn, Alfred Werner, 31 Strawberry Hill Ave. 06902
1947 Wrona, Eugene Adam, 1435 Bedford 06905
1954 Zalichin, Henry, 555 Newfield Ave. 06905
1954 Zimmern, Richard Lee, 1867 Summer 06905

STRATFORD 06497

1973 Alena, Gordon Roland, 3272 Main
1947 Anton, Michael Charles, 1064 Broadbridge Ave.
1963 Asken, Saul, 2505 Main
1957 Biassey, Earle Lambert, 39 Stonybrook Rd.
1959 Birge, Elizabeth Barbara, 3017 Main
1961 Copeck, Gerald, 39 Stonybrook Rd.
1969 Covey, William G., 2875 Main
1952 DeLibero, Anthony F., 387B Sequoia Lane
1936 Friedman, Nathan Harris, Beaver Dam Rd.
1927 Haberlin, Chester Edward, 2553 Main
1972 Halloran, James V., 184B Apache La.
1967 Hanley, Hilda Christina, 374B Piute Lane
1950 Impellitteri, Thomas Joseph, 1795 Main
1963 Keogh, Raymond Joseph, 3557 Main
1959 Levieff, Leo, 2875 Main
1964 Levy, Samuel Howard, 3007 Main
1953 Licciardello, Anthony Thomas, 2875 Main
1946 Lyddy, John Roger, 2875 Main
1938 McLean, T. Smith, Jr., 2875 Main
1931 Oesau, Harold Thomas, 1980 Main
1955 Peterson, Richard Charles, 3966 Main
1942 Roberge, George Edward, 51 Meadowmere Rd.
1960 Weitzner, Arthur, 373 Nichols Ave.
1960 Yildizalp, Naci Mehmet, 2875 Main
1947 Zielinski, John Blaise, 2875 Main

TRUMBULL 06611

Long Hill

1933 Adzima, Joseph Matthew, 45 West Lake Rd.
1957 Austrian, Herman, 935 White Plains Rd.
1947 Brown, Richard J., 157 Pinewood Trail
1961 Citrano, Eugene Charles, 502 White Plains Rd.
1935 Creaturo, Nicholas Edward, 10 Rockland Rd.
1958 Cronan, Thomas Leo, 4719 Madison Ave.
1973 Crossman, Wayne Francis, 15 Laurie Rd.
1967 Feierstein, Saul, 18 Sabina Rd.
1962 Giangrasso, Anthony Eugene, 6363 Main
1965 Kassim, Sami E., 465 Daniel's Farm Rd.
1948 Mack, Arthur Gerard, 1918 Huntington Tpke.
1960 Neth, William Francis, Trumbull Center
1958 Sherlip, Bernard Jay, 935 White Plains Rd.
1942 Trautman, Edwin Frederick, 5367 Main
1959 Veneruso, Ciro, 935 White Plains Rd.
1934 Wehger, Roland Theodore, 158 Plymouth Ave.
1973 Willis, John August, 6004 Main
1969 Zingmond, Erwin, 935 White Plains Rd.

WESTON 06880

1973 Albert, Joel Stuart, 8 Stonehenge Rd.
1957 Bucky, Thomas Lee, Weston Rd.
1962 Schmiedeck, Raoul A., 34 Cedar Hills Rd.

WESTPORT

1970 Aaron, Stuart Denis, 251 Riverside Ave. 06880
1954 Adler, Daniel Harvey, 131 Kings Highway North 06880
1948 Barnett, Roy Nathaniel, 125 South Compo Rd. 06880
1953 Beasley, Albert Sidney, 129 Kings Highway North 06880
1960 Beck, David, 44 Elm 06880
1952 Beinfield, Malcolm Sidney, 125 Kings Highway 06880
1966 Bender, Stuart Howard, 127 Kings Highway North 06880
1957 Beres, Paul, 162 Kings Highway North 06880
1954 Berman, Leo H., 17 Otter Trail 06880
1971 Carroll, Robert McHenry, 246 East State 06880
1963 Cassell, Robert Theodore, 32 Imperial Ave. 06880
1973 Czuczka, Peter, 129 King's Highway No. 06880
1961 Doctor, Daniel W., 129 Kings Highway North 06880
1973 Doctor, Judith Eva, 129 Kings Higway North 06880
1962 Dolberg, Harold M., 2 Mayflower Pkwy. 06880
1965 Dorison, Ezra Eli, 136 Main 06880
1930 Ellrich, David Lionel, 266 State 06880
1943 Gerow, George H., 34 Imperial Ave. 06880
1958 Goehausen, Myles Conrad, 266 East State 06880
1955 Grant, James Mullett, 19 Joann Circle 06880
1973 Horan, Anthony Harding, 131 Kings Highway No. 06880
1960 Hughes, William Francis, 125 Kings Highway 06880
1946 Isenman, Robert, 5 Clifford Lane 06882
1945 Johnson, William Henry Nelson, 12 North Ridge Rd. 06880
1965 Kallick, Charles John, 145 Main 06880
1955 Kaunitz, Paul E., 127 Kings Highway North 06880
1959 Keelan, Edward Michael, 136 Main 06880
1965 Kessler, William, The Willows 06882
1970 Laffaye, Horace A., The Willows 06880
1947 Lebhar, Neil F., 20 Bay 06880
1958 Lichtman, Alvin, 24 Easton Rd. 06882
1969 Lieberson, Alan David, 162 Kings Highway North 06880
1973 Lippman, Kenneth J., 162 Kings Highway No. 06880
1972 Loveless, Mary H., 22 Cavalry Rd. 06880
1950 Lynch, Franklin, 20 Bay 06880
1973 McCrann, Winifred Elizabeth, 9 Round Pond Rd. 06880
1952 Micheels, Louis Joseph, 129 Kings Highway North 06880
1965 Moadel, Michael Moosa, 170 West State 06880
1934 Morgan, William Oliver, 269 Main 06880
1937 Nespor, Robert Wenzel, 101 Compo Rd. South 06880
1959 Perlis, Sanford James, 131 Kings Highway North 06880
1968 Raff, Neil Charles, 6 Village Sq. 06880
1967 Roberts, Gerald David, 162 Kings Highway North 06880
1970 Robins, Richard John, 431 East State 06880
1969 Rossi, Joseph P., 8 Ferry La. East 06880
1971 Schneider, Robert George, 253 Bayberry Lane 06880
1952 Schultz, Martin, 81 Myrtle Ave. 06880
1970 Semmelmeyer, John Albert, III, 162 Kings Highway North 06880
1970 Shapiro, Howard I., 131 Kings Highway North 06880
1958 Shiller, Jack Gerald, 129 Kings Highway North 06880
1941 Shoup, Homer B., Jr., 131 Kings Highway North 06880
1967 Silberman, Charles George, 136 Main 06880
1943 Solway, Rueben Isaac H., 1 St. John Pl. 06880
1973 Stein, Stephen, 125 Kings Highway No. 06880
1961 Steinberg, Harold, 162 Kings Highway North 06880

1950 Syz, Hans, The Lifwynn Foundation, 52 South Morningside Dr. 06882

1960 Tec, Leon, 11 Rocky Field Rd. 06880

1960 Wasserman, Harvey Robert, 136 Main 06880

WILTON 06897

1955 Boas, Norman Francis, Old Ridgefield Rd.

1966 Franklin, David Noel, Merwin Building

1972 Jonas, Sarah Linden, 12 Timber Top Trail

1948 Maidman, Leonard, P.O. Box 218

1954 Zucker, Richard Arthur, Cricket Lane

OUT OF COUNTY

1940 Adams, Mary, 2 Quintard Dr., Port Chester, New York 10573

1938 Ashcroft, Allan Davis, 133 N. Pompano Beach Blvd., Apt. 801, Pompano Beach, Florida 33062

1948 Aube, Louis Armand, 14 Lobban Ave., Chatham, New Brunswick, Canada

1947 Barber, Richard Robbins, 4520 No. Camino Kino, Rt. No. 5, Box 702, Tucson, Arizona 85718

1936 Beck, Eugene Cornelius, 301 Park Ave., New York City, New York 10028

1926 Bowman, Stuart Howard, 3300 Gulf Shore Blvd., Naples, Florida 33940

1942 Colmers, Rudolf Albert, 217 East Huntingdon, Savannah, Georgia 31401

1937 Cunningham, Robert D.M., 976-A Heritage Village Southbury 06488

1934 D'Andrea, Frank Henry, Strawberry Hill Farm, Shoreham, Vermont 05770

1928 Delohery, Cornelius Leo, 56 W. Arch Dr. Lake Worth, Florida 33460

1959 Dobson, John Patrick, G. Pierce Wood Mem'l Hosp., Arcadia, Florida 33821

1964 Goss, Kenneth George, Med. Un. So. Carolina, Charlestown, South Carolina 29401

1945 Gratz, Charles Murray, 1 Tom's Point La., Port Washington, New York 11050

1940 Grigas, John E., P.O. Box 162, Basking Ridge, New Jersey 07920

1960 Henry, Philip Daniel, 299 Seymour Ave., Derby 06418

1937 Howlett, Kirby Smith, Jr., 830-A Heritage Village, Southbury 06488

1955 Huss, Geraldine Rider, 514 Nordhoff Dr., Leonia, New Jersey 07605

1944 Inkster, James H., 109 School, Keene, New Hampshire 03431

1961 Kaplan, Edward D., 11 Carriage Way Dr., Fitchburg, Massachusetts 01420

1955 Keleman, Eugene, 31423 South Coast Highway, South Laguna, California 92677

1938 Keys, Robert Cathcart, Winchester, Kansas 66097

1940 Lengyel, Paul, 325 Wawona, San Francisco, California 94109

1927 Levy, Maurice Noel, 9660 W. Bay Harbor Dr., Bay Harbor Islands, Florida 33154

1933 Lockwood, Jane, Baldwin Hill Rd., New Preston 06777

1950 Losito, Amedeo Joseph, 2888 S. E. Italy, Port St. Lucie, Florida 33452

1948 Luria, Sydney, 1011 N. 35th Ave., Hollywood, Florida 33021

1928 McGourty, Andrew Frederick, Box 77, Norfolk

1948 McIlroy, Patrick Thomas, P. O. Box 197, Danbury, New Hampshire 03230

1936 Moore, Clifford Douglas, 129 E. Lake Dr., Lehigh Acres, Florida 33936

1944 Morrissett, Leslie Emerson, 5104 Riverside Dr., Richmond, Virginia 23225

1938 Murphy, Charles Anthony, Champlain Rd., Chatham, Massachusetts 02633

1951 Murphy, John Christopher, 7 Leeson Park Ave., Dublin, Ireland

1925 Nichols, Charles W., A.I.M. Med. Center, Wellfleet, Mass. 02667

1945 Pearce, Marvin G., 1408 Rabb Rd., Barton Ter., Austin, Texas 78704

1939 Reynolds, Whitman Mead, R. F. D. 1, P. O. Box 772, Stonington 06378

1935 Rogers, Robert Page, Box 245, North Chatham, Massachusetts 02650

1940 Shaw, Lillian Eloise, Baldwin Hill Rd., New Preston 06777

1958 Simon, H. Joseph, V. A. Hospital, Waco, Texas 76708

1930 Sollosy, Alexander, 3200 Palm-Aire Dr. No., Apt. 404, Pompano Beach, Florida 33060

1949 Spannaus, Fred, C., Jr., Rt. 199, Roxbury 06783

1950 Spinelli, Nicholas P. R., 103 Housatonic Dr., Devon 06460

1935 Strayer, Luther Milton, P. O. Box 366, Lancaster, New Hampshire 03584

1938 ter Kuile, Roger Couvelle, 117 W. Main, Lebanon, Illinois

1936 Teuscher, William Philip, Eastport Marina, Annapolis, Maryland 20703

1934 Tinkess, Donald Ewing, Fort Stephenson Pl., Lookout Mountain, Tennessee 37350

1959 Tucker, Elizabeth Mackay, 708 Irving Ave., Syracuse, New York 13210

1971 Walker, Granville Inman, Jr., The Chase Manhattan Bank, New York, New York 10015

1969 Walsh, Richard James, P. O. Box 2728, San Pedro, California 90731

1958 Willis, Thayer, 2757 N.E. 31st, Lighthouse Point, Florida 33064

1953 Zehrung, William John, P. O. Box B, New Milford 06776

Hartford County Association

President: Isadore H. Friedberg, 93 Market Sq., Newington 06111

Vice-President: Henry C. Rogers, 81 South Main, West Hartford 06107

Secretary-Treasurer: Arthur D. Keefe, 477 Connecticut Blvd. East Hartford 06108

Councilor: Merrill B. Rubinow, 320 Main, Manchester 06040

Associate Councilors:

Andrew J. Canzonetti, Scovill Mfg. Co., Waterbury 06706

Joseph S. Sadowski, 212 Ashley, Hartford 06105

Executive Director: Mr. Joseph L. Gordon

Executive office: 230 Scarborough, Hartford 06105
Annual Meeting, First Wednesday in April
Semi-Annual Meeting, Fourth Wednesday in September

AVON 06001

1968 Barwick, Peter E., Avon Professional Center

1964 Harrop, James Shields, 51 Hitchcock Lane

1961 Koff, Arnold M., Avon Professional Center

1963 Kresge, Dwight J., 70 Fox Den Rd.

1961 Lynch, Mark Edward, Avon Professional Center

1943 Marinaro, Nicholas Anthony, 51 Westridge Dr.

1973 Norbert, Gary Francis, 18 West Avon Rd.

1959 Orgun, Ibrahim Necmi, 44 Craigmore Circle

1973 Schubert, Anthony Stephen, 20 West Avon Rd.

1931 Standish, Welles Adams, 24 Crocus Lane

1941 Wiepert, William Murray, West Avon Rd.
1949 Williams, William Edward, West Avon Rd.

BERLIN 06037

1932 Seibert, Alfred Frank, 1511 Farmington Ave.

BLOOMFIELD 06002

1949 Bagnall, Richard Salmon, 616 Bloomfield Ave.
1946 Baskin, Abraham Hyman, 72 Wintonbury Ave.
1951 Brandriss, Joseph, 13 Latimer Lane
1939 Brewer, Francis, 22 Jerome Ave.
1968 Godlash, Kenneth Michael, 711 Cottage Grove Rd.
1961 Hawkins, Josias Henry, 900 Cottage Grove Rd.
1931 Hirshberg, Manuel Shelton, 23 Oak Lane
1956 Knox, A. E. Hertzler, 125 Wadhams Rd.
1965 Levine, Marvin, 41 Jerome Ave.
1947 Miller, Seymour M., 8 West View Dr., Apt. F.
1960 Newell, Richard Clark, 711 Cottage Grove Rd.
1973 Rimai, Mervyn Leon, 1 Regency Dr.
1962 Schmoll, Ralph Dale, 711 Cottage Grove Rd.
1964 Sereda, Lawrence Evans, 701 Cottage Grove Rd.
1936 Slossberg, David Seymour, 1045 Blue Hills Ave.
1973 Srinivasan, Jane Padmini, 6 Revere Dr.
1971 Ungar, Joseph Irwin, 44 Jerome Ave.
1973 Weinstock, Michael Saul, 1 Regency Dr.
1968 Werner, Herbert Jay, 41 Jerome Ave.
1973 Wyse, L. Arnold, 701 Cottage Grove Rd.

BRISTOL

1968 Alisberg, Norman, Bristol Hospital 06010
1957 Ayotte, Lionel Alfred, 45 Prospect 06010
1970 Bagdasarian, Ara Der, 105 Woodland 06010
1973 Baptist, Vincent, 291 Queen 06010
1967 Bean, Kenneth Forte, 199 Riverside Ave. 06010
1934 Beatrice, Alphonse Anthony, 331 Main 06010
1948 Becker, Arnold H., 300 Main 06010
1958 Becker, Irwin William, 300 Main 06010
1936 Bird, Frederick Stamford, 12 Collins Rd. 06011
1947 Brezina, Philip Savage, 105 Woodland 06010
1946 Ciccarelli, Armanno William, 291 Queen 06010
1956 Driscoll, Arthur Joseph, 123 Maple 06010
1962 Erami, Mohammad, 75 High 06010
1973 Estela, Jose A., 94 Bellevue Ave. 06010
1935 Flynn, William Henry, 12 Carleton Pl. 06010
1964 Fox, Edward Francis, 300 Main 06010
1947 Furniss, William Ernest, 190 Summer 06010
1958 Glass, Herbert Lee, 300 Main 06010
1937 Hall, Martin Irving, 752 Hill 06010
1946 Hanley, J. Bainbridge, Peacedale 06010
1969 Hennessey, Brian Charles, 88 Goodwin 06010
1952 Hershey, David Daniel, 101 Woodland 06010
1948 Hershman, Harry Herbert, 122 Maple 06010
1954 Holden, Wesley Wiberg, 291 Queen 06010
1963 Ill, Martin F., 291 Queen 06010
1962 Jensen, Gerald Otto F., 1 Bellevue Ave. 06010
1964 Labraico, James Michael, 51 High 06010
1951 LaPorte, Thomas Francis V., 33 Puritan Rd. 06010
1968 McClure, Phillip Hutson, 300 Main 06010
1965 McDermott, George Michael, 35 Woodland 06010
1974 Mendoza, Jose Porciuncula, 8 Collins Rd., 06011
1963 Mirabelli, Vittorio, 11 Harrison 06010
1974 Murray, Walter Charles, 122 Maple 06010
1973 Oceretko, Jaroslav, 320 Queen St. 06010
1952 Perry, Douglas Dards, 1 Bellevue Ave. 06010
1946 Purney, John, 300 Main 06010
1970 Rappaport, Lawrence Neil, 300 Main 06010
1962 Reiss, Oscar, 202 Queen 06010
1972 Robles, Mario Jose, 88 Goodwin 06010
1959 Russell, Donald Grant, 300 Main 06010
1961 Seguljic, Nicholas J., 202 Queen 06010
1969 Selsky, Leonard Mark, 683 Farmington Ave. 06011
1955 Steinmayer, Otto Christoph, Jr., 88 Goodwin 06010
1939 Tirella, Fred Francis, 85 Belden Gardens Dr. 06010
1957 Williamson, Robert James, 104 Stearns 06010
1934 Winters, Hyman W., 58 Bel Eden Gardens Dr. 06010
1960 Winters, Thomas Edgar, 103 Woodland 06010

COLLINSVILLE 06022

1940 Barker, Norman John, Canton Center, R.F.D.
1949 Diters, Edward Nelson, Gildersleeve Ave.
1969 West, Harold Frederic, 64 Maple Ave.

EAST HARTFORD

1948 Acqua, Louis C., 40 Elm 06108
1969 Berger, Jonathan, 477 Connecticut Blvd. 06108
1967 Cameron, Ian Richard, 111 Founders Plaza 06108
1970 Danigelis, James Arthur, 477 Connecticut Blvd. 06108
1948 Danyliw, Joseph Michael, 110 Main 06118
1961 Daukas, Charles, 809 Main 06108
1968 DeFusco, Leonard Anthony, 477 Connecticut Blvd. 06108
1962 Fitzgerald, James Richard, 477 Connecticut Blvd. 06108
1966 Fogg, Lyman B., 477 Connecticut Blvd. 06108
1946 Golino, Emanuel Francis, 164 Main 06118
1957 Gustafson, Walter Elmer, 45 Connecticut Blvd. 06108
1963 Hurwit, Albert Coleman, 477 Connecticut Blvd. 06108
1973 Imran, Ali Hashmi, 477 Connecticut Blvd. 06108
1955 Keefe, Arthur Dillon, 477 Connecticut Blvd. 06108
1965 Knights, William, 477 Connecticut Blvd. 06108
1955 Loewenberg, Peter Christian, 33 Brown 06118
1934 Lublin, Raymond, 751 Main 06108
1939 Mirabile, Thomas Joseph, 59 Burnside Ave. 06108
1947 Murphy, John Joseph, 27 Wells Ave. 06108
1965 Palma, Joseph Francis, 477 Connecticut Blvd. 06108
1952 Platz, Joseph, 47 Burnside Ave. 06108
1948 Sirota, Harvey H., 3 Saunders 06108
1955 Stearns, Colby Starnaman, 447 Connecticut Blvd. 06108
1967 Sullivan, Robert Michael, 447 Connecticut Blvd. 06108
1942 Trantolo, Arthur, 1559 Main 06108
1973 Zimmerman, Richard Steven, 49 Connecticut Blvd.

ELMWOOD 06110

1932 Romaniello, Rocco John, 1086 New Britain Ave.
1953 Saunders, William Long, 12 Mayflower

ENFIELD 06082

1960 Figueroa, Francis Javier, 258 Hazard
1970 Himelstein, Samuel Carl, 810 Enfield
1968 Hollander, Jules S., 5 North Main
1971 Mathews, John, Enfield Professional Center

FARMINGTON 06032

1946 Barbour, Paul Humphrey, Jr., 2 High
1933 Bausch, Carl Philipp, 98 Mallard Dr. 06085
1970 Blechner, Jack Norman, Univ. Conn. School of Medicine
1970 Carignan, Roland Zephirin, 26 Lake Shore Dr.
1964 Davenport, John Joseph, Jr., 287 Main
1968 Gainter, J. Richard, Univ. Conn. Health Ctr., Building "B"

1960 Hillemeir, Herbert, 51 Dorset Lane
1968 Hinz, Carl Frederick, Jr., Univ. Conn. School of Medicine
1959 Jones, Emily Edwards, 273 Main
1974 Katz, Alfred J., 209 Farmington Ave.
1967 Leach, Charles Nelson, Jr., 174 Main
1968 Lepow, Irwin Howard, Univ. Conn. Health Center
1970 Massey, Robert Unruh, Univ. Conn. School of Medicine
1963 Mauck, F. Taylor, 1 Mill Lane
1949 Monti, Lyle John, 19A Greenbriar Dr.
1966 Patterson, John W., Univ. of Conn. Health Ctr.
1929 Pike, Maurice Mitchell, Old Mountain Rd.
1957 Sherpick, William Edwards, 1 Mill Lane
1963 Stockwell, Richard Matheson, 2 High
1968 Sunderman, Frederick William, Jr., Univ. Conn. School of Medicine
1966 Walker, James Eliot Cabot, Univ. of Conn. Health Ctr.

FORESTVILLE 06011

1931 Frost, Lawrence Hubbard, 14 Fireside Lane

GLASTONBURY 06033

1960 Baxter, Marion Florence, 315 Tall Timbers Rd.
1970 Drury, Robert Warwick, 2900 Main
1933 Earle, Benjamin Baylis, 2239 Main
1935 Griswold, Edwin Monroe, 2869 Main
1967 Gundersen, Charles Arthur, 301 Tall Timbers Rd.
1973 Horrigan, Thomas Henry, 87 Karen Lee Rd.
1950 Lohman, William Henry, 2900 Main
1973 McDonald, June, 2638 Main
1971 Mintell, David Frederick, 124 Hebron Ave.
1949 Platz, Edward John, 100 Brookhaven Dr.
1957 Preble, Charles Richmond, 2638 Main
1969 Price, John Thomas, 2900 Main
1939 Raffa, Joseph, 2638 Main
1961 Rentsch, Juanita Brown, 242 Hubbard
1961 Rentsch, Samuel Burton, Jr., 242 Hubbard
1946 Ricca, Renato A., 28 Ripley Rd.
1961 Taylor, Richard Fiske, 259 Three Mile Rd.

SOUTH GLASTONBURY 06073

1958 Bellucci, Aldo Louis, 34 Lakewood Rd.

EAST GRANBY 06026

1967 Niemann, Claus Peter, South Main

GRANBY 06035

1953 Dwyer, Ruth Tychsen, 261 Salmon Brook
1952 Dwyer, William John, 261 Salmon Brook

HARTFORD

1961 Alden, John Ordway, 151 Farmington Ave. 06115
1956 Alderman, Melville Yale, 140 Woodland 06105
1941 Allen, John Clinton, Hartford Hospital 06115
1970 Allport, Vernon Garfield, 99 Pratt 06103
1969 Alter, Burton Norman, 85 Jefferson 06106
1973 Amato, Joseph Alfred, 7 Sisson Ave. 06106
1968 Amato, Peter Robert, 21 Woodland 06105
1972 An, Byungchang, 85 Jefferson 06106
1970 Anastasi, Anthony Frank, 21 Woodland 06105
1953 Anderson, Gustav Walter, 85 Jefferson 06106
1958 Andrews, A. Ezra, Mt. Sinai Hospital 06112
1974 Angiolicchio, Ruggero, Mt. Sinai Hospital 06112
1936 Apter, Harry, 99 Pratt 06103
1932 Arons, Milton Robert, 750 Main 06106
1952 Aseltine, Deal T., Jr., 283 Collins 06105
1965 Asuncion, Celedonio Manuel, St. Francis Hospital 06105
1955 Austin, G. Lawrence, Jr., 85 Jefferson 06106
1964 Babcock, Albert Lethiccq, 85 Jefferson 06106
1972 Baggish, Michael S., Mt. Sinai Hospital 06112
1968 Bagnall, John S., 85 Jefferson 06106
1970 Bailey, Richard H., 1 American Row 06103
1959 Baker, Gerald Lynn, 85 Jefferson 06106
1957 Baltrucki, Henry Chester, 140 Woodland 06105
1954 Barald, Fred Charles, 114 Woodland 06105
1952 Barrett, Harold Spencer, 79 Elm 06106
1964 Bartus, Stanislaus Anthony, 85 Jefferson 06106
1958 Basile, John X. R., 140 Woodland 06105
1972 Basu, Subrata K., 140 Woodland 06105
1949 Beakey, John Francis, 287 Collins 06105
1957 Beck, Roger Seaton, 85 Jefferson 06106
1960 Becker, Philip Andrew, 85 Jefferson 06106
1948 Beckett, Ronald Stewart, Hartford Hospital 06115
1944 Beebe, John Taylor, 85 Jefferson 06106
1934 Beizer, Edmund, 56 Garden 06105
1950 Bellizzi, Joseph John, 60 Gillett 06105
1962 Bendett, Rodman Jordan, 60 Gillett 06105
1968 Berland, Robert Howard, 21 Woodland 06105
1962 Berlin, Bert B., 85 Jefferson 06106
1947 Bernstein, Louis, 21 Woodland 06105
1938 Birge, Henry L., 664 Farmington Ave. 06105
1968 Black, James C., 1680 Albany Ave. 06105
1941 Bobrow, Aaron, 500 Blue Hills Ave. 06112
1963 Boelhouwer, Cornelis, 200 Retreat Ave. 06106
1962 Bonney, Henry Thurston, Hartford Hospital 06115
1957 Book, Donald Thompson, 151 Farmington Ave. 06115
1965 Borden, Walter A., 85 Jefferson 06106
1967 Boren, Charles Wilson, 200 Retreat Ave. 06106
1947 Bowen, Francis Dorsey T., 51 Gillett 06105
1970 Bower, Bruce F., 85 Jefferson 06106
1959 Bowers, George Nelson, Jr., 80 Seymour 06115
1951 Braceland, Francis J., 200 Retreat Ave. 06106
1941 Brandon, Kenneth Francis, 128 North Oxford 06105
1969 Brenneman, Austin Russell, 85 Jefferson 06106
1946 Brewster, William B., Jr., 85 Jefferson 06106
1972 Bridburg, Richard Martin, 200 Retreat Ave 06106
1960 Brown, Donald Leroy, Hartford Hospital 06115
1970 Brown, Louis, 21 Woodland 06105
1954 Brown, Richard Braddock, 400 Washington 06106
1942 Bruskin, Chaim Elias, 1840 Park 06106
1966 Bucknam, Charles Allen, 85 Jefferson 06106
1954 Bucknam, Frank Gilbert, 609 Farmington Ave. 06105
1970 Bulaong, Rodolfo Gana, 243 Farmington Ave. 06105
1948 Bunce, James Merrill, 85 Jefferson 06106
1968 Burchell, R. Clay, Hartford Hospital 06115
1970 Burnham, Bruce E., 85 Jefferson 06106
1973 Burns, Daniel W., 664 Farmington Ave. 06105
1950 Burns, John Edward, 140 Woodland 06105
1949 Butterfield, Walter Lamont, Jr., 85 Jefferson 06106
1957 Caldarelli, Raymond August, 140 Woodland 06105
1950 Calio, James Vincent, 21 Woodland 06105
1972 Calogero, John A., 212 Ashley 06105
1947 Campbell, Robert Harold, 85 Jefferson 06106
1948 Carangelo, John, 140 Woodland 06105
1954 Carlton, Lawrence S., 560 Hudson 06106
1960 Carpentieri, Joseph, 21 Woodland 06105
1952 Carrabba, Salvatore Richard, 21 Woodland 06105
1948 Cartland, John Everett, Jr., 85 Jefferson 06106
1965 Casale, Albert Joseph, 140 Woodland 06105

1963 Castagno, Marion MacDonald, 215 Washington 06106
1949 Castagno, Rowe Anthony, 215 Washington 06106
1946 Chaucer, Norton G., 56 Coventry 06112
1943 Chester, Lewis L., 140 Woodland 06105
1971 Clark, Isaiah, 520 Albany Ave. 06120
1969 Clarke, William Augustin, Conn. Gen. Life Ins. Co. 06115
1959 Cobb, Richard J., 50 Canterbury 06112
1961 Coelho, Julio Nunes, 64 Garden 06105
1936 Cogswell, Lawrence Perley, 85 Jefferson 06106
1938 Cohn, Samuel Hills, 111 Pearl 06103
1948 Cole, Milton Julius, 99 Pratt 06103
1965 Coley, Geoffrey MacDonell, 85 Jefferson 06106
1964 Collias, James Charles, 85 Jefferson 06106
1954 Conant, Roger Garrett, St. Francis Hospital 06105
1973 Conklin, Thomas J., 200 Retreat Ave. 06106
1949 Conway, Edward Joseph, 85 Jefferson 06106
1955 Cooke, Ronald Wilbur, 85 Jefferson 06106
1960 Cooper, Paul A., 85 Jefferson 06106
1944 Cramer, Sidney Leo, 21 Woodland 06105
1963 Crawford, Jerry, 21 Woodland 06105
1969 Crombie, H. David, Jr., 85 Jefferson 06106
1962 Cronin, Robert John, 85 Jefferson 06106
1955 Cullen, Chester Francis, 140 Woodland 06105
1954 Cullina, Joseph Charles, St. Francis Hospital 06105
1969 Cunin, Burton Maurice, 100 Constitution Plaza 06103
1961 Curis, Francis Thomas, 51 Gillett 06105
1968 Curran, John Joseph, Institute of Living 06106
1946 Curran, Timothy Leonard, 106 Gillett 06105

1972 daCosta, Jose Ferreira, 631 Park 06106
1974 Dake, Peter Denteh, 31 Woodland 06105
1970 D'Alotto, John Anthony, 111 Gillett 06105
1955 Daniels, Evans Howard, Jr., 520 Albany Ave. 06120
1968 Dauphinais, Richard Murray, St. Francis Hospital 06105
1972 DeCarolis, Kenneth A., 85 Jefferson 06106
1954 deChabert-Ostland, Jean Guido, 60 Gillett 06105
1966 DeGraff, Arthur C., Jr., 85 Jefferson 06106
1952 Delgado-Fourzan, Enrique, 200 Retreat Ave. 06106
1946 Delligan, Francis William, 31 Woodland 06105
1966 DeMaio, John Thomas, 283 Collins 06105
1947 Deming, Archibald Staley, 85 Jefferson 06106
1949 Deming, Edward Griswold, 85 Jefferson 06106
1954 Denton, Cleveland Ray, 85 Jefferson 06106
1931 DePasquale, Francis Lawrence, 1992 Broad 06114
1937 DePasquale, John Anthony, 182 Collins 06105
1973 Dickson, Charles Malcolm, 85 Jefferson 06106
1931 Dion, Asa Joseph, 207 Washington 06106
1944 Dion, Julien Andre, 207 Washington 06106
1966 Dobrow, Robert Jay, 85 Jefferson 06106
1944 Doerr, William John, 690 Prospect Ave. 06105
1955 Doherty, Robert C., 36 Woodland
1951 Donnelly, John, 200 Retreat Ave. 06106
1958 Donovan, James Frederic, 85 Jefferson 06106
1957 Donovan, Thomas Joseph, 85 Jefferson 06106
1973 Dorian, Edith Carrier, 51 Coventry 06112
1965 Dougherty, Anthony James, St. Francis Hospital 06105
1962 Dowling, Kevin Vernon, 140 Woodland 06105
1974 Duboczy, John Bela, 400 Washington 06106
1957 Dun, Alan Andrews, 700 Main 06106
1971 Dunn, Harrison, 171 Girard Ave. 06105
1951 Dunsmore, Rembrandt Harvey, 85 Jefferson 06106
1946 Dushane, Joseph Edward, 85 Jefferson 06106

1954 Fagan, E. Cecil, 114 Woodland 06105
1971 Edelstein, Stanley W., 449 Farmington Ave. 06105
1965 Edkin, Robert Edward, 21 Woodland 06105
1948 Ellis, William Avery, 111 Gillett 06105
1969 Enowitch, Bennett, Irving, 60 Washington 06106
1962 Ergin, Muceddit Tahsin, 85 Jefferson 06106
1973 Evans, Jerome Edward, Institute of Living 06106

1961 Faiaz, Esmail K., 21 Woodland 06105
1949 Fairlie, Chester Wilson, Jr., 85 Jefferson 06106
1967 Fauliso, Richard Joseph, 111 Gillett 06105
1919 Fay, William James, 98 Garden 06105
1967 Feldman, Paul, 60 Gilbert 06105
1957 Fieldman, Arnold, Hartford Hospital 06115
1954 Fierberg, A. Arthur, 21 Woodland 06105
1967 Fisher, Robert Lyle, 85 Jefferson 06106
1962 Fishman, Ronald Stanley, 60 Gillett 06105
1951 Flaherty, Morgan Vincent, 36 Woodland 06105
1943 Fleisch, Milton Carl, 64 Garden 06105
1969 Flescher, Robert, 85 Jefferson 06106
1948 Foohey, Fleur Cornelius, 146 Jefferson 06106
1947 Fortier, Norman Lionel, 85 Jefferson 06106
1964 Fortin, Victor Louis, Jr., 21 Woodland 06105
1973 Foster, James Henry, 80 Seymour 06115
1964 Fox, Brendan Michael, 210 Ashley 06105
1947 Franco, John Estrela, 206 Ashley 06105
1968 Franklin, John B., 85 Jefferson 06106
1968 Frederick, Edward J., 85 Jefferson 06106
1956 Frederickson, Robert William, 85 Jefferson 06106
1956 Freedman, Myron Earl, 60 Gillett 06105
1970 Freymann, John Gordon, 80 Seymour 06115
1963 Friend, Hugh Borden, 85 Jefferson 06106
1973 Futterman, Henry A., 85 Jefferson 06106

1967 Gahm, Norman Henry, 85 Jefferson 06106
1937 Galinsky, David, 35 North Whitney 06105
1967 Gambarini, Alberto Jose, 140 Woodland 06105
1971 Gandel, Paul Nelson, 999 Asylum 06105
1971 Gaudio, Alexander R,. 85 Jefferson 06106
1967 Geary, Frederick Lawrence, 283 Collins 06105
1970 Geary, William John, 283 Collins 06105
1974 Geetter, Albert L., 21 Woodland 06105
1969 Geetter, David Meranski, 212 Ashley 06105
1931 Geetter, Isidore Stolper, 92 Fern 06105
1959 George, Anastasios B., 85 Jefferson 06106
1972 Gerber, Joanna Seydel, 85 Jefferson 06106
1949 Giardi, Leo Paul, 561 New Britain Ave. 06106
1963 Giarnella, Egidio, 285 Franklin Ave. 06114
1970 Gibbons, John Martin, Jr., 114 Woodland 06105
1941 Gibson, Forrest Davis, 85 Jefferson 06106
1957 Giligan, John, 21 Woodland 06105
1937 Giuliano, Sebastian, 434 Franklin Ave. 06114
1957 Given, James Bartley, 85 Jefferson 06106
1962 Glassman, Herman H., 60 Gillett 06105
1934 Glaubman, Henry Mitchell, P. O. Box 26, Blue Hills Station 06112
1967 Glueck, Bernard Charles, 400 Washington 06106
1965 Godar, Thomas Joseph, St. Francis Hospital 06105
1966 Gold, Bertram, St. Francis Hospital 06105
1968 Gold, Herbert, 99 Pratt 06103
1936 Gold, Louis Henry, 21 Woodland 06105
1965 Goldberg, Morton Harold, 60 Gillett 06105
1960 Goldenberg, Arnold, 21 Woodland 06105
1930 Goldenberg, Jacob Joseph, 832 Albany Ave. 06112
1952 Goldenberg, Philip Theodore, 140 Woodland 06105
1949 Goldenthal, Carol, 132 Jefferson 06106
1963 Goldman, Philip H., 99 Pratt 06103
1947 Goldstein, Max Richard, 111 Pearl 06103
1944 Golston, Harry, 750 Main 06106
1967 Golub, Grant Richard, 85 Jefferson 06106
1962 Gorman, Arthur Thomas, 85 Jefferson 06106
1970 Gorman, David Joseph, 210 Ashley 06105

1954 Gossling, Harry Robert, 85 Jefferson 06106
1935 Gould, Max Martin, 387 Blue Hill Ave. 06112
1972 Grace, Thomas William, St. Francis Hospital 06105
1973 Graydon, Roland James, II, 85 Jefferson 06106
1969 Grayson, Donald Ross, 60 Washington 06106
1943 Greene, Gerald S., 85 Jefferson 06106
1971 Grey, Neil Jay, 60 Gillett 06105
1973 Grody, Marvin Henry, 50 Gillett 06105
1971 Gross, Elliot M., 2 Holcomb 06112
1952 Gross, Norman David, 140 Woodland 06105
1947 Gurwitz, Jack, 21 Woodland 06105

1970 Halligan, Thomas Joseph, Jr., 140 Woodland 06105
1969 Haksteen, John Jacob, 60 Washington 06106
1953 Hamilton, George Livingstone, Jr., 79 Elm 06115
1954 Hamilton, T. Stewart, 80 Seymour 06115
1947 Hamlin, Charles H., 85 Jefferson 06106
1952 Hannan, William Stephen, 140 Woodland 06105
1965 Hardy, James H., 85 Jefferson 06106
1938 Harris, Louis David, 242 Trumbull 06106
1957 Hart, William Edmund, 77 Canterbury 06112
1974 Hasson, Jack, Mt. Sinai Hospital 06112
1930 Hastings, Louis Pease, 31 Woodland 06105
1960 Haugh, John Denis, 140 Woodland 06105
1954 Hauss, Donald Sherman, P. O. Box 145 06101
1937 Hazen, Donald Robert, 36 Woodland 06105
1968 Healy, Joseph William, 287 Collins 06105
1965 Hedberg, David Leigh, 21 Woodland 06105
1959 Henken, Ernest Marvin, 21 Woodland 06105
1931 Hennessy, James Joseph, 1039 Asylum Ave. 06105
1972 Hensley, Ronald Verne, 400 Washington 06106
1946 Hepburn, Robert Houghton, 85 Jefferson 06106
1972 Hewett, William Joseph, 85 Jefferson 06106
1949 Hickcox, Curtiss Bronson, 85 Jefferson 06106
1969 Hickmon, Ned, 140 Woodland 06105
1974 Hill, David Albert, 85 Jefferson 06106
1974 Hill, Thomas Michael, Institute of Living 06106
1956 Himelstein, Monroe, 85 Jefferson 06106
1934 Hirschfeld, Otto Max, 140 Woodland 06105
1951 Hockmuth, Lloyd Norton, St. Francis Hospital 06105
1969 Hoffman, Harry B., 85 Jefferson 06106
1968 Horowitz, Benson Jay, 449 Farmington Ave. 06105
1955 Houck, John Howard, 200 Retreat Ave. 06106
1949 Howard, Laura Koon, 400 Washington 06106
1950 Howe, Edward Redfield, 85 Jefferson 06106
1959 Hughes, Calvin Thomas, Jr., 36 Gillett 06105
1962 Hull, Crawford, Hartford Hospital 06115
1953 Hulme, Stephen A., St. Francis Hospital 06105
1936 Hurwitz, George Hillel, 99 Pratt 06103
1969 Hurwitz, Myron Robert, 660 Prospect Ave. 06105
1959 Huszar, Robert John, St. Francis Hospital 06105
1960 Hyun, Jayson, St. Francis Hospital 06105

1970 Iger, Howard G., 200 Retreat Ave. 06103
1968 Izard, Mark Whitaker, 85 Jefferson 06106

1961 Jacuch, Michael, 245 Wethersfield Ave. 06114
1934 James, Lewis Paul, 350 Farmington Ave. 06105
1941 January, Derick Algernon, 85 Jefferson 06106
1948 Janzen, Arnold Herbert, 85 Jefferson 06106
1961 Jeresaty, Robert M., St. Francis Hospital 06105
1961 Johnson, Donald William, 85 Jefferson 06106
1951 Johnson, James C., Jr., 90 Washington 06115
1941 Johnson, Paul, 85 Jefferson 06106
1970 Jones, Richard F., III, 85 Jefferson 06106
1959 Josel, Mark, 21 Woodland 06105
1928 Kalin, Jacob Isaac, 216 Farmington Ave. 06105
1963 Kallfelz, Alois, St. Francis Hospital 06105
1974 Kang, Juliana Haeng Cha, 3 Holcomb 06112
1955 Kaplan, Bernard Joseph, 21 Woodland 06105
1945 Karpe, Richard, 236 Oxford 06105
1924 Katz, Henry, 123 Washington 06106
1950 Kay, Richard, 85 Jefferson 06106
1949 Kearney, Maurice Walter, Jr., 206 Ashley 06106
1960 Keefe, William Peter, 240 Ashley 06105
1920 Kelly, Claude Currie, 85 Jefferson 06106
1972 Kelly, Donald Robert, 85 Jefferson 06106
1950 Kemler, R. Leonard, 21 Woodland 06105
1966 Kenny, William Joseph, Institute of Living 06106
1960 Kiley, Robert Francis, 85 Jefferson 06106
1954 Kingston, Paul J., 140 Woodland 06105
1946 Kirsch, Neville, 56 Garden 06105
1966 Klatsky, Alan Usher, 85 Jefferson 06106
1946 Klein, Joseph, 85 Jefferson 06106
1964 Kligerman, Sidney, 49 North Beacon 06105
1958 Knight, Harold Fuller, 140 Woodland 06105
1958 Knox, Kenneth Raven, 85 Jefferson 06106
1970 Koff, Marvin Saul, 660 Prospect Ave. 06105
1954 Kosar, Walter Philip, 85 Jefferson 06106
1974 Kosto, Bernard, 85 Jefferson 06106
1944 Krall, Irving Hadley, 99 Pratt 06103
1973 Kramer, Robert Allyn, Mt. Sinai Hospital 06112
1956 Krieger, James L., 85 Jefferson 06106
1962 Kuehn, Paul Gerhard, 85 Jefferson 06106
1964 Kugelman, Thomas Peter, 85 Jefferson 06106
1966 Laakso, William Bruce, 85 Jefferson 06106
1949 Lahey, William J., St. Francis Hospital 06105
1971 Lahiri, Bimalin, 114 Woodland 06105
1963 Landry, Arthur Bernard, Jr., 114 Woodland 06105
1962 Langmann, Robert D., 85 Jefferson 06106
1943 Lapenta, Rocco George, 1307 Albany Ave. 06112
1946 Larson, Albert Lloyd, One Tower Sq. 06120
1972 Lashgari, Manocher, 21 Woodland 06105
1971 Lawson, Ian Richard, Hebrew Home 06112
1951 Lee, William, Hartford Hospital 06115
1968 Lehman, William B., 85 Jefferson 06106
1962 Leicach, Mario, 85 Jefferson 06106
1968 Lepow, Martha Lipson, McCook Hospital 06112
1954 LeRoyer, C. Phillip, 1 Tower Sq. 06120
1933 Levin, Albert Eliot, 242 Trumbull 06103
1954 Levreault, Gerald Victor, Conn. Gen. Life Ins. Co. 06115
1965 Levy, Benjamin, 85 Jefferson 06106
1933 Liebowitz, Seymour Alan, 60 Gillett 06105
1971 Linburg, Richard Murray, 85 Jefferson 06106
1973 Lindenberg, Leslie Barre, 85 Jefferson 06106
1965 Linnolt, Erik, 200 Retreat Ave. 06106
1974 Lippman, Leonard, 449 Farmington Ave. 06105
1953 Lipton, Harold, Ct. St. Dept. of Health, Crippled Children Section 06115
1937 Lischner, Moses David, 35 Whitney 06105
1967 Liss, Joseph Paul, St. Francis Hospital 06105
1946 Litter, Leo, 21 Woodland 06105
1949 Little, David Mason, Jr., 80 Seymour 06115
1974 Lloyd, Douglas Seward, 79 Elm 06115
1955 Lo Presti, Daniel A., 85 Jefferson 06106
1957 Low, Henry Bei Chung, 85 Jefferson 06106
1959 Luby, Meade Justin, 140 Woodland 06105
1963 Lucas, Joseph John, 17 Sisson Ave. 06106
1970 Lynch, William A., 85 Jefferson 06106
1968 Macaulay, William Philip, 85 Jefferson 06106
1964 Mackay, Iain Murray, 85 Jefferson 06106
1919 Maislen, Samuel, 2138 Main 06120
1957 Malinconico, Lawrence Lorenzo, 136 Retreat Ave. 06106
1973 Manas, Alan, 100 Constitution Plaza 06103
1952 Mancall, Irwin Tuch, 21 Woodland 06105
1931 Mancoll, Morris Max, 242 Trumbull 06103
1967 Mancoll, William, 242 Trumbull 06103

1949 Mann, Norman Morton, 21 Woodland 06105
1971 Mannix, Henry, Jr., 114 Woodland 06105
1951 Marino, Frank Sebastian, 51 Gillett 06105
1951 Markley, D. Norman, 422 Farmington Ave. 06105
1959 Marshall, Bruce Robert, 85 Jefferson 06106
1952 Marshall, Daniel, 179 Allyn 06103
1965 Martin, Robert Stockton, 85 Jefferson 06106
1952 McAdams, George Brockenbrough, Hartford Hospital 06115
1952 McAndrews, James Francis, 85 Jefferson 06106
1964 McCarthy, John Denis, 140 Garden 06105
1974 McCawley, Austin, St. Francis Hospital 06105
1962 McCooey, John Henry, 85 Jefferson 06106
1952 McCormick, James Michael, Hartford Hospital 06115
1938 McCrann, Donald Joseph, 36 Woodland 06105
1967 McGowan, George E., 85 Jefferson 06106
1950 McKnight, Robert Scott, 200 Retreat Ave. 06106
1968 McLean, Barbara Ann, St. Francis Hospital 06105
1949 McLean, Charles Ellsworth, Hartford Hospital 06115
1935 McNulty, Terence Francis, 21 Sisson Ave. 06106
1972 Mead, Peyton H., 85 Jefferson 06106
1972 Mendelson, Louis Moses, 85 Jefferson 06106
1973 Meridy, Howard William, 85 Jefferson 06106
1971 Milikow, Edward, 500 Blue Hills Ave. 06112
1937 Miller, Harry Bernard, 21 Woodland 06105
1974 Miller, Joel Michael, 50 Allen Pl. 06106
1933 Mirabile, Charles Samuel, 85 Jefferson 06106
1957 Mittelman, Jay Arnold, 21 Woodland 06105
1974 Mittelmann, Michael, 151 Farmington Ave. 06115
1947 Moher, James J., 51 Gillett 06105
1954 Molloy, Robert Joseph, 60 Gillett 06105
1966 Moloney, David Richard, 21 Woodland 06105
1969 Morse, Edward Everett, McCook Hospital 06112
1972 Muangman, Pongsa-Pyn, 114 Woodland 06105
1973 Mucha, Theodore Frank, Institute of Living 06106
1970 Mueller, Robert Ernest, 85 Jefferson 06106
1972 Murray, James Hamilton, 85 Jefferson 06106
1969 Myerson, Manny, 1039 Asylum Ave. 06105
1957 Nakhoul, Jabbour, 21 Woodland 06105
1938 Neidlinger, William James, 85 Jefferson 06106
1962 Neill, Mather Humphrey, 151 Farmington Ave. 06115
1946 Nichols, Edward, 85 Jefferson 06106
1947 Nichols, Frederick L., 85 Jefferson 06106
1952 Nicholson, Richard Edwin, 140 Garden 06105
1973 Nino, Alfredo F., 85 Jefferson 06106
1948 Nolan, John O'Leary, 206 Ashley 06105
1961 O'Brien, Frederick John, 60 Gillett 06105
1967 O'Brien, James Edward, 114 Woodland 06105
1944 O'Connell, John Daniel, 140 Woodland 06105
1923 O'Connell, John Francis, 165 Sisson Ave. 06105
1952 O'Connell, Thomas Joseph, St. Francis Hospital 06105
1973 O'Hayre, Walter Louis, 55 Trumbull 06103
1973 O'Hurley, John George, 240 Ashley 06105
1953 Opinsky, Morton, 140 Woodland 06105
1955 Ormrod, John Kenneth T., 151 Farmington Ave. 06115
1970 O'Rourke, James, 2 Holcomb 06112
1955 Otis, Richard Dickinson, Hartford Hospital 06115
1968 Owens, Guy, McCook Hospital 06112
1958 Painter, Robert Warren, 85 Jefferson 06106
1963 Palermino, Donata Angelo, 136 Retreat Ave. 06106
1972 Passman, Bernard, 21 Woodland 06105
1968 Pasternak, Herbert Stephen, 85 Jefferson 06106
1938 Peacock, Albert Upham, 85 Jefferson 06106
1972 Pentz, Paul Gordon, 200 Retreat Ave. 06106
1944 Perkins, Joseph Augustine, 60 Gillett 06105
1969 Pet, Donald, Blue Hills Hospital 06112
1933 Phelps, Maxwell Overlock, 85 Jefferson 06106
1959 Phinney, Arthur O., Jr., 85 Jefferson 06106
1949 Piacente, Salvatore Sylvester, 140 Woodland 06105
1959 Pinkes, Sam, 21 Woodland 06105
1968 Pisetsky, Myron Matthew, 200 Retreat Ave. 06106
1944 Pitegoff, Gerald Irving, 60 Gillett 06105
1948 Pizzo Paul S., 662 Wethersfield Ave. 06114
1967 Platt, Joan M., 85 Jefferson 06106
1950 Polivy, Charles, 60 Gillett 06105
1958 Powers, Edward Donald, 576 Farmington Ave. 06105
1948 Prestley, William Francis, 85 Jefferson 06106
1962 Prindle, Clair Gilbert, 700 Main 06106
1949 Pulaski, John Edward, 40 Wethersfield Ave. 06114
1971 Purcell, James Joel, 31 Woodland 06105
1950 Pyrtek, Ludwig Joseph 85 Jefferson 06106

1967 Quinto, Eugene Louis, 111 Gillett 06105

1957 Radding, Philip, 60 Gillett 06105
1928 Radom, Myron Michael, 242 Trumbull 06103
1923 Rankin, Bertrand Fred, 116 Beacon 06105
1966 Raycroft, John Francis, 85 Jefferson 06106
1964 Reardon, George Emmett, St. Francis Hospital 06105
1950 Reed, John Francis, 85 Jefferson 06106
1954 Reinfrank, Ralph Frank, Hartford Hospital 06115
1962 Richman, Sidney Morris, 999 Asylum Ave. 06105
1963 Ridlon, Herrick Clark, 85 Jefferson 06106
1973 Ritland, Gerald David, McCook Hospital 06112
1973 Roberts, Lloyd Eugene, 136 Retreat Ave. 06106
1969 Roberts, Melville Parker, 85 Jefferson 06106
1973 Robertson, Russell Wright, 85 Jefferson 06106
1950 Robinson, David, 21 Woodland 06105
1953 Robinson, John Christie, One Tower Sq. 06115
1973 Robinson, Paul D., Jr., 151 Farmington Ave. 06115
1943 Rocco, Mario P., 500 New Britain Ave. 06106
1948 Roh, Charles Ernest, 85 Jefferson 06106
1936 Rosenbaum, George Jonas, 647 New Britain Ave. 06106
1970 Rosenberg, Jack Eli, 400 Washington 06106
1966 Rosenberg, Mervin, 100 Constitution Plaza 06103
1954 Rosenfeld, Joseph Eugene, 660 Prospect Ave. 06105
1973 Rosenweig, Jacob, 500 Blue Hills Ave. 06112
1963 Rosenthal, Irving Isaac, 21 Woodland 06105
1965 Rosenthal, Moe Bernard, 1680 Albany Ave. 06105
1958 Ross, Wayne D., 85 Jefferson 06106
1965 Rossbaum, Robert Philip, 85 Jefferson 06106
1970 Rossi, Michael Andrew, 85 Jefferson 06106
1964 Rosson, Robert Stanley, 85 Jefferson 06106
1962 Rotatori, Eugene S., 111 Gillett 06105
1935 Roth, Frank Edward, 60 Gillett 06105
1963 Roth, Malcolm Shoor, 100 Constitution Plaza 06103
1957 Rouman, James Christ, 80 Seymour 06115
1973 Roussis, Konstantinos, St. Francis Hospital 06105
1946 Rubin, Albert, 60 Gillett 06105
1921 Russell, G. Gardiner, 85 Jefferson 06106
1948 Russo, Joseph Nicholas, 85 Jefferson 06106
1953 Ryan, William Francis, Jr., 350 Farmington Ave 06105

1951 Sachs, Julius Johnson, 60 Gillett 06105
1963 Sadowski, Joseph Stanley, 212 Ashley 06105
1923 St. John, Leopold Albert, 25 Charter Oak Ave. 06106
1973 Salerno, Nicholas Richard, Mt. Sinai Hospital 06112
1956 Saltzman, Seymour Harold, 60 Gillett 06105
1973 Satlof, David M., 50 Gillett 06105

1937 Sayers, John Joseph, 865 Park 06106
1963 Sayers, John Henry, 660 Prospect Ave. 06105
1949 Schloss, Walter Amson, 21 Woodland 06105
1947 Schnap, Isidore, 85 Jefferson 06106
1946 Schwartz, Herbert Norman, 60 Gillett 06105
1973 Schwartz, Louis, 50 Gillett 06105
1972 Schweizer, Robert Thomas, 85 Jefferson 06106
1940 Scoville, William Beecher, 85 Jefferson 06106
1952 Scull, Edward, 85 Jefferson 06106
1968 Secor, Ralph Calvin, 140 Garden 06115
1957 Seide, Morris J., 85 Jefferson 06106
1948 Seigle, Stewart Pinnell, 85 Jefferson 06106
1973 Selcow, Jay Elliot, 85 Jefferson 06106
1952 Sennett, Edward Joseph, 114 Woodland 06105
1942 Serbin, A. Frederick, 21 Woodland 06105
1960 Shafer, Myron Edward, 85 Jefferson 06106
1963 Shaw, Richard Clark, 140 Garden 06105
1970 Shechan, George Dunn, 1039 Asylum Ave. 06105
1964 Shelton, Philip Arthur, 85 Jefferson 06106
1947 Sherwood, Paul M., 400 Washington 06106
1951 Shoukimas, John, 21 Woodland 06105
1941 Shull, John Coulter, 85 Jefferson 06106
1959 Sicklick, Elliot, St. Francis Hospital 06105
1974 Sigman, Robert Lewis, 21 Woodland 06105
1954 Siker, Estelle, 23 Colebrook 06112
1948 Silbermann, Salo Joseph, 100 Constitution Pl. 06103
1971 Silver, Herbert, 80 Seymour 06115
1973 Silverstein, H. Robert, 60 Gillett 06105
1968 Slover, William Pyle, Jr., 85 Jefferson 06106
1965 Smith, Jay, R. V., 85 Jefferson 06106
1956 Smith, Leonard Kelley, 36 Woodland 06105
1944 Smith, William Leslie, 85 Jefferson 06106
1966 Soares, Manuel Joseph, 151 Farmington Ave. 06115
1935 Solomon, Charles Isadore, 85 Jefferson 06106
1943 Solomon, Rebecca Zincher, 85 Jefferson 06106
1963 Speer, Christopher S., 85 Jefferson 06106
1937 Spekter, Louis, 79 Elm 06115
1951 Spillane, Richard, 85 Jefferson 06106
1941 Sponzo, James Joseph, 3 Webster 06114
1972 Stabenau, James R., 2 Holcomb 06112
1952 Stack, William J., 566 Prospect Ave. 06105
1963 Stavola, John Joseph, 78 Retreat Ave. 06106
1946 Steege, Theodore Walter, 85 Jefferson 06106
1971 Steinhacker, Robert, Mt. Sini Hospital 06112
1962 Stent, Philip Anthony, St. Francis Hospital 06105
1973 Stern, P. Gary, 21 Woodland 06105
1949 Steven, Ranald James, 85 Jefferson 06106
1971 Streeto, James Michael, 85 Jefferson 06106
1971 Sutula, Stanley Joseph, Jr., 79 Elm 06106
1957 Swain, Edward Bruce, 85 Jefferson 06106
1957 Sweet, Elliott Boyd, 85 Jefferson 06106
1948 Swett, Norris Poole, 1 Tower Sq. 06115

1962 Tadeo-Goldman, Josephine A., 2 Holcomb 06112
1970 Taylor, Peter Thurston, 85 Jefferson 06106
1939 Tennant, Robert, 80 Seymour 06115
1957 Thaw, Benjamin Dows, 1039 Asylum Ave. 06105
1949 Thayer, John Ernest, 114 Woodland 06105
1957 Thomas, John B., 85 Jefferson 06106
1970 Thomas, John M., 85 Jefferson 06106
1969 Toomey, James Michael, 2 Holcomb 06112
1938 Tonken, Louis Clarence, 487 Farmington Ave. 06105
1953 Trench, James McKeehan, 85 Jefferson 06106
1957 Tripp, William Henry, 85 Jefferson 06106
1965 Trowbridge, Philip E., 85 Jefferson 06106
1942 Truex, Edward Hamilton, Jr., 85 Jefferson 06106
1946 Tucker, Charles Albert, 85 Jefferson 06106
1959 Tucker, Jolyon Simeon, 85 Jefferson 06106
1950 Tulin, George Arthur, 85 Jefferson 06106
1947 Turco, Vincent Joseph, 140 Woodland 06105
1937 Twaddle, Paul Holmes, 85 Jefferson 06106
1972 Tyrrell, David Perry, 85 Jefferson 06106

1933 Uricchio, Joseph George, 40 Wethersfield Ave. 06114

1963 Vance, Joseph Addison, III, Conn. Gen'l Life Ins. Co. 06115
1958 Vecchiolla, John Anthony, 60 Gillett 06105
1960 Veeder, Raymond, 200 Retreat Ave. 06106
1952 Vernlund, Robert James, 85 Jefferson 06106
1948 Von Salzen, Charles F., 85 Jefferson 06106

1950 Waltman, Irving, 85 Jefferson 06106
1955 Ward, Kenneth Eaton, Conn. Gen'l Life Ins. Co. 06105
1950 Wardner, LeRoy Hamilton, 85 Jefferson 06106
1965 Warner, Allen, 85 Jefferson 06106
1932 Warring, Howard Lewis, 12 Sanford 06120
1964 Waterman, William Bullock, 151 Farmington 06105
1974 Watkins, George M., Univ.-McCook Hospital 06112
1966 Watson, H. Kirk, 85 Jefferson 06106
1946 Wawro, N. Williams, 85 Jefferson 06106
1943 Weiner, Sylvia, 99 Pratt 06103
1971 Weiss, Stephen A., 21 Woodland 06105
1936 Weissenborn, Walter, 196 Terry Rd. 06105
1955 Welhaven, Arne, 136 Retreat Ave. 06106
1948 Wells, Gideon Robbins, 21 Woodland 06105
1963 Westcott, Jack Lawrence, 85 Jefferson 06106
1954 Wetstone, Howard Jerome, Hartford Hospital 06115
1974 Wheeler, Maynard Boynton, 85 Jefferson 06106
1938 Whitcomb, Benjamin Bradford, 85 Jefferson 06106
1938 White, Benjamin Vroom, 85 Jefferson 06106
1946 White, Edward Philip, 44 Garden 06105
1960 White, Kenneth Howard, Jr., St. Francis Hospital 06105
1958 Whitehead, David Earle, Hartford Hospital 06115
1965 Wieche, Donald Richter, 85 Jefferson 06106
1907 Wiedman, Otto George, 31 Woodland 06105
1951 Wiese, Chester Albert, Hartford Hospital 06115
1948 Wiesel, Benjamin, 85 Jefferson 06106
1962 Wilcox, David Sanborn, 85 Jefferson 06106
1958 Williams, Henry M., 85 Jefferson 06106
1930 Wilson, William Augustus, 841 Asylum Ave. 06105
1969 Winalski, H. Paul, 114 Woodland 06105
1959 Wolf, Arthur Dale, 85 Jefferson 06106
1959 Wolfson, S. Steven, 21 Woodland 06105
1933 Wood, Frank Oliver, 85 Jefferson 06106
1962 Woodhouse, Robert William, 85 Jefferson 06106
1949 Woodruff, John Harrison, 85 Jefferson 06106

1972 Yin, Raymond Wah, St. Francis Hospital 06105

1947 Zarkin, Oscar Howard, 44 Whitney 06105
1959 Zeller, William Webb, 200 Retreat Ave. 06106
1970 Zelman, Marvin, 85 Jefferson 06106
1973 Zeman, Peter Michael, 200 Retreat Ave. 06106
1948 Zimmerman, Leon Ward, 664 Farmington Ave. 06105
1970 Ziter, Fred M. H., Jr., 85 Jefferson 06106
1961 Zmijeski, Charles, Jr., 60 Gillett 06105

KENSINGTON 06037

1948 Chotkowski, Ludmil Adam, 685 Farmington Ave.
1967 Leicach, Jorge, 19 Clover Hill Pl.
1965 Lopez, Raul E., 320 New Britain Rd.
1930 Matteis, Joseph Theodore, 142 Moorcland Rd.
1938 Perakos, George Peter, 9 High Rd.
1961 Stewart, William Errol Louis, 460 New Britain Rd.
1961 Sultar, Robert Stephan, 320 New Britain Rd.

MANCHESTER

1953 Baldwin, W. Howard, 341 Broad 06044
1937 Barry, Joseph Charles, 156 Main 06040
1971 Benavides, Carlos Gonzalo, 36 Haynes 06040
1946 Besser, Edward Lambert, 17 Haynes 06040
1961 Braat, John Petrus, 265 Ludlow Rd. 06401
1960 Breer, Robert Dunwoody, 17 Haynes 06040
1952 Butterfield, Robert Kenneth, R.F.D. No. 2, Box 72
1957 Caldwell, David Manchester, Jr., 26 Haynes 06040
1966 Campbell, Iain Gordon, 153 Main 06040
1963 Charendoff, Leo, 320 Main 06040
1957 Demko, Richard Michael, 29 Haynes 06040
1940 Diskan, Albert Elmer, 29 Haynes 06040
1963 Duke, Martin, Manchester Memorial Hospital 06040
1958 Eddy, John Randall, 124 Timrod Rd. 06040
1971 Ferrari, Dudley Alfred, 36 Haynes 06040
1966 Fialkoff, Ruben, Manchester Memorial Hospital 06040
1965 Flanagan, Edward P., 20 Jean Rd. 06040
1926 Friend, Amos Edgar, 36 Haynes 06040
1972 Ghabrial, Sobhy L., 342 Main 06040
1973 Golkar-Sisani, Firooz, Manchester Hospital 06040
1958 Gram, Peter Basil, 36 Haynes 06040
1963 Guardino, Joseph John, 52 Park 06040
1954 Guinan, Don Allen, 153 Main 06043
1955 Hamilton, Charles Raymond, Jr., 153 Main 06043
1952 Healy, Thomas McLean, 257 East Center 06040
1965 Heimann, Walter Gad, 29 Haynes 06040
1949 Helfrick, Francis Woodrow, 257 East Center 06040
1970 Hendessi, Hossain, 320 Main 06040
1951 Herman, Ralph Scallon, Jr., 9 Sanford Rd. 06041
1950 Horton, Frank Hamilton, 17 Haynes 06040
1957 Horwitz, Melvin, 29 Haynes 06040
1944 Jacobson, Charles Edward, Jr., 172 East Center 06040
1972 Kahaner, Harvey Allen, 320 Main 06040
1957 Karns, Robert Earl, 29 Haynes 06040
1936 Keeney, Robert Raymond, Jr., 29 Haynes 06040
1969 Kim, Cyril K., 342 Main 06040
1971 Klipstein, Arnold Lloyd, 153 Main 06043
1972 Klipstein, Eve Adele, 153 Main 06040
1968 Krupp, Alan Fred, 26 Haynes 06040
1971 Kurien, V. Abraham, 29 Haynes 06040
1950 Lehmus, Harold J., 56 Haynes 06040
1948 Lockward, Howard Jefferson, 44 Haynes 06040
1921 Lundberg, George Albin Ferdinand, 223 East Center 06040
1957 Lundberg, George Albin Ferdinand, Jr., 153 Main 06043
1953 Malone, Harold John, 153 Main 06040
1952 Marzialo, Nicholas A., 15 Middle Tpke., West 06044
1969 Meisner, Burton M., 320 Main 06040
1964 Milewski, Stanislaw Antoni, 191 Main 06040
1946 Miller, Gerard Roland, 17 Haynes 06040
1950 Morrison, Donald William, 17 Haynes 06040
1951 Moyer, Winfield Tyson, Jr., 36 Haynes 06040
1969 Nix, Harold Robert, 191 Main 06040
1963 Norman, Paul Stuart, 320 Main 06040
1974 Nosce, Luis Valdehuesa, 150 North Main 06040
1957 Pastel, Harvey, 257 East Center 06040
1945 Prignano, John Vincent, 28 Bishop Dr. 06040
1957 Roberts, Douglas James, Jr., 29 Haynes 06040
1971 Romeo, Stephen Gerard, 191 Main 06040
1947 Rosen, Theodore, 808 Main 06040
1965 Rubin, Martin Lewis, 29 Haynes 06040
1951 Rubinow, Merrill Benjamin, 320 Main 06040
1951 Schardt, Walter Mallory, 191 Main 06040
1973 Shakibai, Ali, 315 East Center 06040
1960 Smith, Douglas Humbert, 153 Main 06043
1971 Smith, Samuel Goodale, 191 Main 06043
1956 Snyder, Herbert Leon, 29 Haynes 06040
1957 Stanton, Robert Eugene, 153 Main 06043
1961 Sulick, Edward Joseph, 17 Haynes 06040
1959 Summer, Philip Edward, 191 Main 06040
1937 Sundquist, Alfred Bernhardt, 17 Haynes 06040
1971 Tehrani, Hossein Limoui, 320 Main 06040
1950 Thomas, Andrew Henry, 36 Haynes 06040
1953 Walden, Robert Clarence, Jr., 17 Haynes 06040
1957 Warren, David L., 56 Haynes 06040
1968 Wheeler, John Paul, 191 Main 06040
1970 Wickersham, C. Wendell, III, 44 Haynes 06040
1962 Woolpert, Keith Dellan, 36 Haynes 06040

MARLBOROUGH 06424

1965 Schreuder, Otis Blaine, South Rd.

NEW BRITAIN

1957 Ahrens, Lawrence Bernard, 300 Main 06051
1952 Bayer, Alexander Eli, 233 Main 06051
1972 Bee, Rudolf W., 99 West Main 06051
1957 Belkin, Joseph William, 40 Hart 06052
1948 Bellach, Harry, 300 Main 06051
1957 Bernstein, Abraham, 33 Lexington 06052
1959 Bernstein, Chester Murray, 233 Main 06051
1934 Bernstein, Dwight J., New Britain General Hospital 06050
1963 Blank, Gerald Issar, 601 Farmington Ave. 06053
1974 Blau, Jeffrey S., 40 Hart 06052
1930 Blogoslawski, Walter Joseph, 199 West Main 06052
1958 Bower, Russell Stanley, 73 Cedar 06052
1957 Bray, George Henry, 73 Cedar 06052
1927 Buol, Robert Stanley, 91 Ten Acre Rd. 06052
1961 Byer, Seymour, 40 Hart 06052
1947 Carlson, Carl Edwin, 73 Cedar 06052
1964 Clapp, Paul, Grove Hill Clinic 06050
1946 Clark, Bliss Bartlett, 92 Grand 06052
1945 Clarke, Harold Metcalf, 40 Hart 06052
1969 Cosentino, Robert Thomas, 300 Kensington Ave. 06051
1952 Crothers, Charles Henry, 300 Kensington Ave. 06051
1965 Crowley, Joseph William, 233 Main 06051
1963 Dalburg, Lewis Arthur, Jr., 300 Kensington Ave. 06051
1931 Darrow, John Edward, 55 West Main 06051
1962 Dinep, Martin, 40 Hart 06052
1970 Doctoroff, Stephen John, 300 Kensington Ave. 06051
1960 Dorfman, George, 40 Hart 06052
1941 Dorian, Edward, 300 Main 06051
1973 Dragon, Robert Edward, 73 Cedar 06052
1947 Dunn, Morris L., 300 Main 06051
1942 Eisenberg, Sidney Edwin, 33 Lexington 06052
1970 Enriquez, Alfonso Raymundo, 300 Kensington Ave. 06051
1963 Fenaughty, Richard W., 300 Kensington Ave. 06051
1969 Filewicz, Stanley Peter, 55 West Main 06051
1969 Finkelstein, Harvey Ira, 100 Grand 06052
1971 Folk, Joseph John, Grove Hill Clinic 06050
1960 Formica, Joseph J., 73 Cedar 06052
1974 Giertz, William Edward, New Britain Gen. Hosp. 06050
1974 Geoghegan, John William, 100 Grand 06050
1943 Greenblatt, Harold Joseph, 73 Cedar 06052
1964 Gryboski, William A., 73 Cedar 06052
1955 Hagedorn, Maxwell Ernest, 55 West Main 06051
1966 Harwin, S. Martin, 300 Kensington Ave. 06051

1951 Herr, Herbert Harvey, 300 Kensington Ave. 06051
1967 Hicks, Robert Edward, 70 West Main 06051
1965 Horrax, Trudeau M., 300 Kensington Ave. 06051
1970 Jacobson, James J., 40 Hart 06052
1958 Jarboe, Edward J., 300 Kensington Ave. 06051
1957 Johnson, Samuel Ault, 300 Kensington Ave. 06051
1966 Johnson, Theodore Herbert, 300 Kensington Ave. 06051
1974 Judd, Brian Charles, New Britain Gen. Hosp. 06050
1951 Kaplan, Henry Morris, 73 Cedar 06052
1960 Kawecki, Witold, 165 West Main 06051
1973 Koch, Lawrence W., 40 Hart 06052
1972 Koops, Herbert J., 30 Bank 06051
1942 Lacava, John James, 73 Cedar 06052
1973 Lakin, Paul .C, New Britain General Hospital 06050
1946 Larkin, John Charles, New Britain General Hospital 06050
1966 Lawlor, Eugene Francis, 165 West Main 06052
1956 Leonhardt, Charles George, 670 Arch 06051
1946 Levine, Howard, New Britain General Hospital 06050
1948 Livingston, William T., Grove Hill Clinic 06050
1938 Lo Vetere, Angelo Arthur, 70 West Main 06051
1968 Lund, David Allan, New Britain General Hospital 06050
1955 Madden, Thomas James, 100 Grand 06052
1957 Mandell, Julian, 40 Hart 06052
1952 Marsh, Alexander, Central Conn. St. Coll. 06051
1948 Martin, Edward, Grove Hill Clinic 06050
1946 Mlynarski, Joseph Andrew, 73 Cedar 06052
1969 Moss, Robert, 73 Cedar 06050
1970 Nelson, Rodger Keith, 300 Kensington Ave. 06051
1940 Nevulis, Anthony V., 32 Grove Hill 06052
1974 Noniewicz, Stanley John, 40 Edbert Dr. 06052
1968 Nourizadeh, Ali-Reza, 73 Cedar 06052
1956 Ohanesian, Jacob Harry, 40 Hart 06052
1938 Orbach, Egmont Julius, 81 West Main 06051
1973 O'Reilly, Hugh Edward, 73 Cedar 06052
1938 Parlato, Harry Anthony, 55 West Main 06051
1944 Peck, Bernard Carl, 32 Park Pl. 06052
1963 Pito, Vincent J., New Britain General Hospital 06050
1939 Pola, William Edward, 41 Lexington 06052
1957 Rackliffe, Robert Lockwood, 670 Arch 06051
1936 Resnik, Edward, 272 Main 06051
1962 Ringrose, Vincent Patrick, Jr., 73 Cedar 06052
1964 Root, Howard Frank, Jr., New Britain General Hospital 06050
1940 Rosahn, Paul Dolin, New Britain General Hospital 06050
1970 Samson, Donald Walter, 300 Kensington Ave. 06051
1930 Schechtman, Charles Theodore, 73 Cedar 06052
1954 Scheer, Edward Harold, 40 Hart 06052
1973 Scholand, Joseph Francis, 300 Kensington Ave. 06051
1931 Schupack, Samuel David, 38 Mason Dr. 06052
1938 Scully, Roger Tehan, 469 Lincoln 06052
1964 Sharon, Henry Joseph, 40 Hart 06052
1962 Sirkin, Robert Benjamin, 300 Kensington Ave. 06051
1955 Slater, Gregory S., 40 Hart 06052
1930 Slysz, Ladislaus Bernard, 247 West Main 06051
1970 Solano, Humberto, 300 Main 06051
1936 Squillacote, Vincent Joseph, 30 Lyle Rd. 06053
1974 Steckler, Jeffrey Brandeis, 55 West Main 06051
1961 Stewart, William Errol Louis, 109 Vine 06050
1938 Sullivan, Charles Noyes, 55 West Main 06051
1973 Swartz, George J., 300 Kensington Ave. 06051
1956 Taylor, Daniel Morse, 300 Kensington Ave. 06051
1971 Taylor, William R., 219 West Main 06052
1962 Thomas, Richard John, 40 Hart 06052
1940 Tisher, Paul Winslow, 389 Shuttle Meadow Ave. 06052
1941 Trapp, Francis W., 55 West Main 06051
1967 Visnauskas, John William, 83 Vine 06052
1962 Waskowitz, William Jay, 40 Hart 06052
1965 Waugh, Robert Edmund, New Britain General Hospital 06050
1957 Wehrli, Adolph, 300 Kensington Ave. 06051
1973 Welna, Joseph A., 73 Cedar 06052
1948 Wesoly, Andrew Stanley, 27 Grove Hill 06052
1932 White, John Cowles, 300 Kensington Ave. 06051
1969 Wilcox, Richard Nash, 223 West Main 06052
1964 Wilson, James Miller, 300 Kensington Ave. 06051
1954 Winship, Granville Montgomery, Grove Hill Clinic 06050
1948 Wolfson, Samuel, New Britain General Hospital 06050
1950 Wright, Ralph C., 300 Kensington Ave. 06051
1948 Yannello, Mario Humbert, 520 Shuttle Meadow Ave. 06052
1966 Zaccheo, Thomas Joseph, 300 Kensington Ave. 06051
1965 Zembko, Andrew Francis, 73 Cedar 06052

NEWINGTON 06111

1957 Bachman, John Presly, Cedarcrest Hospital
1952 Callahan, James Lawrence, 24 Walsh Ave.
1958 Clancy, John James, 41 Market Sq.
1950 Cohen, Benjamin, Newington Children's Hospital
1938 Curtis, Burr H., 181 East Cedar
1974 Daniels, Geraldine B., 555 Willard Ave.
1935 Fenney, Philip William, Veterans Administration Hospital
1949 Flynn, Frederick, Newington Children's Hospital
1946 Friedberg, Isadore Hirsh, 93 Market Sq.
1957 Gold, Howard Carl, 24 Walsh Ave.
1972 Khan, Khurshid, Cedarcrest Hospital
1971 Ozonoff, Maer B., Newington Children's Hospital
1952 Pierce, John Archer, 181 East Cedar
1929 Simmons, Eric Melville, 20 Birch Lawn Ter.
1962 Turner, Wallace Wilder, Cedarcrest Hospital
1957 Wolfson, Herman, 142 Market Sq.

PLAINVILLE 06062

1943 Iannotti, John Pasquale, 78 Whiting
1964 Saltzman, Marvin 29 Park
1962 Yannios, James Nicholas, 73 East Main
1956 Zebrowski, Edward Julian, 120 West Main

PLANTSVILLE 06479

1937 Connor, George Michael, 964 South Main

ROCKY HILL 06067

1973 Agarwal, Chandra Kumar, Veterans Hospital
1954 Benkovich, Geza O., Veterans Hospital
1974 Braren, Carl Henry, 1800 Silas Deane Hwy.
1958 Kessel, Leizor, Veterans Hospital
1973 Ranganathan, Vasudeva, Veterans Hospital
1972 Roland, Menclick, Veterans Hospital
1946 Walker, Donald Albert, 2051 Silas Deane Hwy.

SIMSBURY 06070

1965 Hampton, Walter Richard, 930 Hopmeadow
1974 Himmelsbach, Richard Karl, 132 Firetown Rd.
1973 Holdt, Janice E. J., 720 Hopmeadow
1966 Keating, Stanley John, 34 Beldenwood Rd.

1965 Lewis, Garner Lennon, 720 Hopmeadow
1925 Murphy, Owen Lee, Canal
1964 Scudder, Walter Tracy, 720 Hopmeadow
1968 Sherman, Stephen Huntington, 13 Hopmeadow

SOUTHINGTON 06489

1958 Alfonsi, Ambrose A., 70 Berlin Ave.
1955 Arcano, Joseph Timothy, 201 Main
1973 Blumer, Arthur T., 98 Main
1964 Browne, Harry Herbert, 25 Berlin Ave.
1949 D'Angelo, Anthony James, 94 Center
1949 D'Angelo, Eugene Joseph, 94 Center
1935 Dudac, Thomas William, 98 Main
1933 Gura, George Michael, 76 Main
1973 Heap, Lewis Derek, Bradley Memorial Hospital
1973 Kablotsky, Yale Howard, 30 Carter Heights
1974 Mertz, James Joseph, Bradley Memorial Hospital
1973 Somogyi, Balazs Bela, 98 Main
1947 Stetson, Harold Prescott, 101 North Main
1929 Thalberg, Reuben Edward, 80 Oakland Rd.

SOUTH WINDSOR 06074

1968 Gutkowski, Thaddeus John, 1700 Ellington Rd., P.O. Drawer B
1933 Houle, Raymond Theodore, 564 Main
1958 McGann, Desmond Martin, 658 Ellington Rd., P. O. Box 584

SUFFIELD 06078

1938 Coates, S. Paul, 370 North Main
1959 Zaczynski, Edward Joseph, 150 Hill

THOMPSONVILLE 06082

1937 Bloom, David Irving, 128 Pearl
1957 Czaja, Ronald Joseph, Hazard Ave.
1937 Dignam, Bernard Stephen, 133 Pearl
1966 Gfeller, Robert John, Enfield Professional Center
1938 Gourlie, Howard Wallace, 75 North Main
1950 Johnson, Carl Wentworth, 11 North Main
1948 Robbins, Jacques, 5 North Main
1960 Schear, William Augustine, Hazard Ave.

UNIONVILLE 06085

1941 O'Connell, Enos Joseph, 63 Main
1972 Woolfson, Arthur Ervin, 36 Main

WEST HARTFORD

1944 Allen, Mary Mazner, 1007 Farmington Ave. 06107
1949 Allen, Roy, 15 North Main 06107
1955 Altenberg, Henry Edward, 2668 Albany Ave. 06117
1966 Anderson, Albin Stephen, 17 Drury Lane 06117
1947 Barbour, Charles Manson, Jr., Wyngate Lane 06107
1973 Berkley, Richard Bruce, 61 So. Main 06107
1972 Blakeslee, Sister Mary Helene, 27 Park Rd. 06105
1967 Brewer, Sybille von Lindeiner, 109 Pioneer Dr. 06117
1972 Brodey, James Franklin, 854 Farmington Ave. 06119
1929 Buck, Burdette Jay, 215 Tunxis Rd. 06107
1929 Carroll, James Edward, 250 Griswold Dr. 06119
1933 Cenci, Vincent Peter, 854 Farmington Ave. 06119
1973 Choi, Chang Song, 43 Vardon Rd. 06117
1922 Clason, Freeman Pell, 40 West Hill Dr. 06119
1967 Coley, Mary Smythe, 253 Ridgewood Rd. 06107
1960 Conroy, John Thomas, 46 Sunrise Hill Dr. 06107
1953 Conway, Mark, 125 LaSalle Rd. 06107
1967 Cullen, Mary Teresa, 27 Fernwood Rd. 06119
1928 Cushman, Laurence Arnold, 19 Brunswick Ave. 06107
1940 D'Ambruoso, Dominic Charles, 30 Glen Hollow 06117
1962 David, Nasser David, 290 Park Rd. 06119
1914 Deming, Clinton Demas, 173 Steele Rd. 06119
1938 Donovan, William Francis, 798 Farmington Ave. 06119
1937 Downer, Muriel Case, 17 Stratford Rd. 06117
1942 Duksa, Walter Joseph, 113 Bainbridge Rd. 06119
1938 Durkee, Ralph Everett, Jr., 85 Brookside Dr. 06107
1953 Earle, Lyon Hooper, Jr., 16 Sunset Ter. 06107
1960 Ehrlich, Eugene L., 45 South Main 06107
1927 Elliot, K. Gregory, 27 Brookline Dr. 06107
1943 Ellis, Lyle Gaffney, 1260 Farmington Ave. 06107
1952 Emmel, Robert Cortland, 61 South Main 06107 06107
1941 Feeney, Thomas Michael, 4 Sunset Ter. 06107
1958 Felber, John Hans, 61 South Main 06107
1934 Finley, George Clark, 1248 Farmington Ave. 06107
1913 Flaherty, Claude Vincent, 2308 Albany Ave. 06117
1965 Fons, Anthony Ludwig, III, 345 North Main 06117
1968 Foster, Kendall Wilson, Jr., 41 Westminster Dr. 06107
1925 Fox, James Charles, Jr., 26 Westmoreland Dr. 06117
1952 Frank, Ludwig Mathias, 801 Farmington Ave. 06119
1957 Friel, Patrick Brendan, 801 Farmington Ave. 06119
1972 Gabrielle, Fred Michael, 820 Farmington 06119
1972 Gerber, William Hermann, 1005C Farmington Ave., 06107
1953 Gerent, Walter Paul, 115 Meadow Lane 06107
1927 Goff, Charles Weer, 210 Kane 06119
1950 Gordon, Yale, 10 Princeton 06110
1958 Graffagnino, Paul N., 66 Uplands Dr. 06107
1949 Haines, Robert William, 14 Brace Rd. 06107
1939 Hall, Wendell Charles, 84 Brace Rd. 06107
1967 Harris, Robert Lester, 758 Farmington Ave. 06119
1958 Hill, John M., 61 South Main 06107
1973 Hoffman, Lee Ira, 758 Farmington Ave. 06119
1924 Hogan, Walter Louis, 68 Rumford 06107
1930 Holtz, Raymond Sidney, 16 Mt. Farms Rd. 06117
1965 Hosking, Wayne Frederick, 31 Rillbank Ter. 06107
1954 Houlihan, John Joseph, 125 LaSalle Rd. 06107
1963 Howe, George O., 696 Mountain Rd. 06117
1942 January, Mildred Hartshorn, 94 Walbridge Rd. 06119
1935 Kaschmann, Joseph, 1118 Trout Brook Dr. 06119
1930 Kunkel, F. Earle, 33 Mountain Brook Rd. 06117
1969 Kurland, Morton David, 125 LaSalle Rd. 06107
1913 Landry, Arthur Bernard, Sr., 9 Pine Rd. 06119
1926 Landry, Benedict Bernard, 893 Farmington Ave. 06107
1953 Leeds, William Gerard, 818 Farmington Ave. 06119
1942 Lenehan, J. Richard, 10 Dale 06107
1964 Livingston, Robert, 1329 Boulevard 06119
1956 MacKinnon, Ian, 61 South Main 06107
1955 Maloney, Richard Harrington, 801 Farmington Ave. 06119
1953 Marsh, Raymond Randolph, 10 Arapahoe Rd. 06107
1959 Marshall, Lois Foster, 53 Westmont 06117
1935 Martin, John Garthwaite, 1064 Farmington Ave. 06107
1961 Milyko, Alexander Busch, 61 South Main 06107
1969 Morhardt, Charles Edwin, 45 South Main 06107
1969 Moskowitz, Harold, 14 Arlen Way 06117
1935 Murphy, Thomas Francis, 850 Farmington Ave. 06119
1973 Nathanson, Robert Bennett, 61 So. Main 06107
1928 O'Connell, Maurice Francis, 17 Westwood Rd. 06117

1921 Osborn, Stanley Hart, 36 Cobbs Rd. 06107
1934 Preston, Thomas R., 119 Bainbridge Rd. 06119
1951 Rankin, Clair, 1329 Boulevard 06119
1963 Rentz, Robert Edward, 1102 Farmington Ave. 06107
1960 Rogers, Henry Crampton, 81 South Main 06107
1924 Root, Maurice Timothy, 51 North Main 06107
1935 Root, Sophie Andrews, 51 North Main 06107
1972 Rosenkranz, Barry Martin, 639 Prospect Ave. 06105
1956 Rothstein, Isadore, 90 Haynes Rd. 06117
1947 Rup, Edmond Carl, 164 Westland Ave. 06107
1936 Ryan, Francis James, 65 Cliffmore Rd. 06107
1947 Schatten, Siegfried Sylvester, 1157 New Britain Ave. 06110
1971 Schuster, Harvey Stuart, 342 North Main 06117
1966 Scully, Harold Francis, 29 Winterset Lane 06117
1964 Smith, Jay Donald, 10 Princeton 06110
1952 Smith, Lillian A., 44 Hartwell Rd. 06117
1939 Smith, Wilson Fitch, 25 Bainbridge Rd. 06119
1927 Standish, E. Myles, 11 Greenridge Lane 06107
1935 Standish, Hilda Crosby, Greenridge Lane, Sunset Farm 06107
1948 Teahan, John William, 7 Hillsboro Dr. 06107
1961 Van Der Werff, Jacob Anne, 801 Farmington Ave. 06119
1923 Van Kleeck, Euen, 53 Concord 06119
1940 Walker, Robert, 10 Flagstad Rd. 06107
1937 Walton, Loftus Linwood, 799 Farmington Ave. 06119
1973 Wasserman, Herbert E., 1005B Farmington Ave. 06107
1957 Welch, Edmund Thomas, Jr., 5 Manor Lane 06107
1920 Weld, Stanley B., 15 Gloucester Lane 06107
1973 Wells, Jean, 1005 Farmington Ave. Plaza 06107
1941 Wineck, Morris Samuel, 11 Eastwood Rd. 06117
1934 Winters, John Thomas, 10 Dale 06107
1973 Wolkoff, Albert, 81 So. Main 06107
1922 Wright, William Witter, 200 Fern 06119
1948 Zeldis, Norman, 21 Tanglewood Rd. 06117
1970 Zentner, Arnold S., 854 Farmington Ave. 06119

WEST SIMSBURY 06092

1952 Bannister, William Kirtley, 3 Roswell Rd.
1974 Dimlich, H. Karl, 41 Madison La.
1930 Reynolds, Robert Gardner, 180 West Ledge Rd.

WETHERSFIELD 06109

1956 Agee, Fred Benson, Jr., 51 Westway
1968 Callan, John P., 425 Coppermill Rd.
1938 Carvey, Edward Vincent, 1 Garden
1948 Cavalieri, Rinaldo Joseph, 454 Highland
1937 Fagan, Francis Xavier, 147 Wells Farm Dr.
1932 Filson, Ralph Marshall, 855 Ridge Rd.
1960 Foote, Franklin M., 4 Round Hill Rd.
1936 Gallivan, John Norman, 951 Ridge Rd.
1954 Giosa, Nicholas, 463 Brimfield Rd.
1952 Golden, Archie James, 91 Hillcrest Ave.
1946 Hellijas, Carl Sylvester, 4 River Rd.
1933 Howard, Harold Amasa, 330 Main
1953 Johnston, J. Howard, 522 Wolcott Hill Rd.
1934 Keefe, Raymond Starkey, 304 Church
1949 Murphy, Robert Daniel, 5 Cottwell Dr.
1973 O'Connell, Paul Benedict, 239 Silas Deane Highway
1961 Pace, Silvio Fernando, 63 Wells Rd.
1960 Pierce, John Arthur, 11 Golf Rd.
1964 Powell, Nancy Rolick, 473 Wolcott Hill Rd.
1960 Ryan, William Donovan, 229 Maple
1950 St. John, Nicholas E., 375 Ridge Rd.
1932 Storms, William Frederick, 147 Main

WINDSOR 06095

1958 Britting, John Anthony, 697 Poquonock Ave.
1964 Carr, Michael Francis, 412 Conestoga
1949 Donohue, Stephen Michael, 525 Windsor Ave.
1967 Ford, James Raymond, 697 Poquonock Ave.
1959 Granville, Norma Belle, 126 Clover
1956 Hamblin, Wolcott Chaffee, 342 Park Ave.
1957 Keefe, Raymond Bernard, 697 Poquonock Ave.
1930 MacCready, William Harold, 3 Orchard Lane
1955 Mack, Daniel Elliott, 74 Mack
1957 Murphy, Edward Francis, 1000 Prospect Hill Rd.
1947 Poirier, Theophane M., 26 Maple
1958 Pullen, Richard Donald, 74 Mack
1950 Silliman, Warren B., 26 Prospect
1964 Tummillo, Mary Anne, 924 Windsor Ave.

WINDSOR LOCKS 06096

1930 Byrne, David W., 412 Elm
1952 Eilbergas, Michael, 403 Halfway House Rd.
1948 Kennedy, John Joseph, Jr., 46 Center
1964 Wehr, Robert, 326 South Center

OUT OF COUNTY

1952 Abbot, Frank Kimball, 8-B Country Sq. Dr., Cromwell 06416
1966 Argall, Temby Richie, 36 Grand Pl., Newtown 06470
1955 Barry, Robert Torney, Craigville Beach Rd., West Hyannisport, Mass. 02672
1972 Becker, Marion Schanz, P.O. Box 1026, Torrington 06790
1932 Benoit, Raoul Joseph, 209 Rosary Rd., Clearwater, Florida 33516
1962 Brewer, Timothy Francis, III, 5 Boulder Rd., Otter Cove, Old Saybrook 06475
1973 Bundy, Edward Stillman, Meriden Hospital, Meriden 06450
1958 Burke, Gerald Francis, Charlotte Hungerford Hospital, Torrington 06790
1965 Bush, Hubert Sutton, Jr., 57 Union, Rockville 06066
1951 Canzonetti, Andrew Joseph, Scovill Mfg. Co., Waterbury 06706
1947 Carey, Thomas B., 221 N.E. 15th, Delray Beach, Florida 33444
1961 Casey, Edward James, 1641 Colden Ave., Bronx, New York 10462
1965 Colliton, Robert John, 34 Oakmoor Dr., Vernon 06066
1933 Corcoran, Michael A., Ridgeview Rest Home, Cromwell 06416
1943 Crispin, Maximilian A., 1411 N. Flagler Dr., West Palm Beach, Florida 33401
1946 Desmond, Charles T., Parkside Apts., 10649 Montrose Ave., Bethesda, Maryland 20614
1970 Douglas, Herbert John, 490 Riverside Dr., Cheshire 06410
1969 Dunne, Michael Joseph, 9013 Beatty Dr., Alexandria, Virginia 22308
1947 Ebers, Theodore Martin, P. O. Box 821, Sedona, Arizona 86336
1942 Edson, Reginald Campbell, 963 Catalina Rd., St. Augustine Shores, Florida 32084
1954 Egloff, Frank Rattray L., 89 Garden Rd., Woods Hole, Mass. 02543
1972 Fahey, Philip James, 1301 So. Harrison, Fort Wayne, Indiana 46801
1933 Farland, Victor Louis, 3000 N. E. 56th Ct., Fort Lauderdale, Florida 33308

1973 Flores, Pacifico, Gaylord Hospital, Wallingford 06492
1967 Gutierrez, Teofilo Gregorio, Jr., Meriden Hospital Meriden 06450
1962 Hawkes, Peter Harold Robert, St. Mary's Hosp., Waterbury 06702
1934 Horning, Benjamin Graham, Hostal Alameda, Calle Casas de Compos, 3 Malaga, Spain
1935 Hough, Perry Tyler, Parrsboro, Nova Scotia, Canada
1948 Jennings, Walter Forfar, 122 E. Shore Ave., Groton Long Point 06340
1930 Kalett, Joseph, 2055 Gulf of Mexico Dr., Apt. 209, Sarasota, Florida 33577
1937 Katz, Dewey, 29 North, Willimantic 06226
1951 Keet, John Eugene, Southwest Rd., Waterbury 06708
1928 Laplume, Albert Antonio, 2806 N.W. 52nd Ct., Tamarac, Ft. Lauderdale, Florida 33309
1950 Lear, Harold A., 1170 5th Ave., New York, New York 10029
1965 Letourneau, David Joseph, 4080 Piedmont Rd., Pensacola, Florida 32503
1936 Lewis, Samuel Donald, 2760 So. County Rd., Palm Beach, Florida 33480
1971 Marcin, Mary Julia Regan, 5018 Round Tower Pl., Columbia, Maryland 21043
1969 Matthews, Lester G., 303 West Main, Freehold, New Jersey 07728
1937 McCue, Martin P., 473 Boston Post Rd., Waterford 06385
1934 McDermott, John Francis, 1434 Punahou, Arcadia Apt., Honolulu, Hawaii 96822
1934 Menousek, Joseph Albert, 270 Celestial Way, Juno Beach, Florida 33408
1946 Messina, Michael C., 337 Southern Comfort Park, Clearwater, Florida 33515
1973 Moon, Won Koul, 106 Litchfield 06790
1954 Motyka, Stanley J., 2614 Spyglass Dr., Pismo Beach, California 93449
1960 O'Connor, Luke Edward, 57 Union, Rockville 06066
1928 Ogden, Ralph Trafton, 94 Main, Sanford, Maine 04073
1935 Papa, John Smith, 1950 N.E. 59th Pl., Fort Lauderdale, Florida
1930 Parshley, Philip Ford, Box 509, Pinehurst, North Carolina 28374
1926 Partridge, Winthrop Prescott, 35 Isla Bahia Dr., Fort Lauderdale, Florida 33316
1952 Pepper, Dickerson Sergeant, 1414 Stony Circle, Gladwyne, Pennsylvania 19035
1930 Pullen, Richard Woollard, 2nd General Hospital, Landstuhl, Germany A.P.O. 09180
1972 Robbins, Harrison M., 8924 LaJolla Scenic Dr., LaJolla, California 92037
1923 Robinson, Wilfred John, P.O. Box 7052, Christiansted, St. Croix 00820
1953 Schwartz, Harold, 5025 N. Paulina, Chicago, Illinois 60640
1953 Stapor, Joseph John, 536 Gospel Lane, Orange 06477
1930 Steincrohn, Peter Joseph, 1430 Ancona Coral Gables, Florida 33146
1936 Stewart, Lester Quentin, 33 Erickson Way, South Yarmouth, Mass. 02664
1932 Talbot, Henry Pierce, 259 Shamrock Blvd., Venice, Florida 33595
1921 Thenebe, Carl Leonard, R. F. D. Town Hill Rd., New Hartford 06057
1941 Tutles, Alexander James, Box 212, Melbourne, Florida 32901
1937 Unsworth, Arthur Charles, P. O. Box 606, Center Harbor, New Hampshire 03226
1934 Weiner, Julius Gills, 3580 S. Ocean Blvd., South Palm Beach, Florida 33480
1931 Weisenfeld, Nathan, 1445 Tamiami Trail, Sarasota, Florida 33580
1973 Wong, Paul Yuko, Day Kimball Hospital, Putnam 06260
1951 Wood, Dwight Reynolds, 391 Ocean Ave., New London 06320
1957 Wright, John Cardwell, 80 So. Main, Middletown 06457
1971 Wurster, Richard Edmund, 5506 E. 16th, Indianapolis, Indiana 46218
1967 Zlotsky, Norman A., 57 Union, Rockville 06066
1950 Zyla, Edward J., 23 Maple, Rockville 06066

Litchfield County Association

President: Norman E. Smith, Jr., 71 Spencer, Winsted 06098
Vice-President: Albert S. Atwood, 30 Peck Rd., Torrington 06790
Secretary-Treasurer: Frank Lovallo, Sharon Med. Arts Ctr., Hospital Hill, Sharon 06069
Councilor: Stuart Ragland, Jr., Smith Hill Rd., Colebrook 06021
Associate Councilor: Robert W. Harkins, Judson Rd., Woodbury 06798
Annual Meeting, Second Tuesday in April
Semi-Annual Meeting, Second Tuesday in October

COLEBROOK 06021

1957 Luchs, David, Schoolhouse Rd.
1967 Ragland, Stuart, Jr., Smith Hill Rd.

CORNWALL 06753

1922 Walker, Wilmarth Bradford

FALLS VILLAGE 06031

1946 Bornemann, Carl, Beebe Hill Rd.

HARWINTON 06790

1938 Kott, Joseph Henry, Cobble Rd.

KENT 06757

1971 Abreu, Francisco B., RFD #1, Box 59
1966 Goss, John D., Jr., Macedonia Rd.
1946 Greiner, George Frederick, Kent School
1963 Peters, Donald Henry, Elizabeth

LAKEVILLE 06039

1945 Brewer, Alfred Edwin, Main
1966 Gott, Peter, Main
1970 Swift, David Bearce, P.O. Box 153
1968 Westsmith, Richard Alan, Main
1936 Wieler, Harry Julius, Interlaken Rd.

LITCHFIELD 06759

1946 Chait, Sidney A., Box 1082, Woodruff Ct.
1950 Christine, Barbara Weed, Milton Rd.
1946 Dautrich, Albert William, West
1966 MacMaster, Duncan Raymond, Prospect
1939 Warner, C. Norton, North
1956 White, Fowler F., R. F. D. 2, Norfolk Rd.

NEW HARTFORD 06057

1942 Markwald, Heinz Wolfgang, Main

NEW MILFORD 06776

1949 Baird, Robert Desmond, Twin Pines, R. F. D. 3
1967 Danzig, Samuel D., New Milford Medical Building
1963 Estrada, Julian Albert, New Milford Medical Building
1952 Ferris, Jeffrey, 62 Bank
1956 Happel, Elizabeth, 62 Bank
1957 Haxo, John Victor, 15 Old Park Lane Rd.
1938 Ignace, Stephen J., 65 Bridge
1973 Kavirajan, Vadakkekara, 49 East
1964 Lahvis, W. Frederick, P. O. Box 148
1949 Morrow, Howard S., Old Park Lane Rd.
1971 Nagaraja, Urabagilu, 62 Bank
1947 Street, John M., P. O. Box 777
1972 Tunick, Carl, 18 Elm

NEW PRESTON 06777

1973 Peck, Morgan Scott, Bliss Rd., R. F. D. 1

NORFOLK 06058

1937 Barstow, Richard Iddings, The Village Green

NORTH CANAAN

Canaan 06018

1935 Elliott, John Richard, Main

ROXBURY 06783

1964 McDonald, Robert L., Roxbury Falls Rd.

SALISBURY 06068

1943 Mackay, William D.
1955 Smith, Frank Edward, Jr., Main

SHARON 06069

1973 Charde, John Patrick, Sharon Clinic
1968 Collins, Richard Neil, Sharon Clinic
1972 Curtis, John P., Sharon Clinic
1972 Finkelstein, Jack, P. O. Box 566
1949 Fisher, Robert Lownds, Sharon Clinic
1948 Fowler, George A., Sharon Clinic
1962 Gallup, John William, Sharon Clinic
1947 Gevalt, Frederick C., Jr., Sharon Clinic
1947 Grendon, David Arthur, Sharon Hospital
1942 Gudernatch, Gaert Steuerwald, Main
1949 Havdock, George Guest, Sharon Clinic
1972 Kellman, Ian Arthur, Sharon Med. Arts Ctr.
1947 Linder, James H., Box 416
1973 Longstreth, George, Sharon Clinic
1951 Lovallo, Frank, Sharon Med. Arts Ctr., Hospital Hill
1969 Mirabile, Charles Samuel, Jr., Main
1953 Moore, Roger W., Sharon Clinic
1972 Moore, Samuel W., Lowe Rd.
1966 Reyelt, Walter Peter, Jr., Sharon Clinic
1974 Tesoro, Michael Richard, Main
1971 Tiedemann, Richard N., Main
1953 Waugh, David Darwin, New

SOUTH KENT 06785

1974 Mellisy, Andrew, Rt. 341 & South Rd.

TERRYVILLE 06786

1951 Coral, Mark, 9 Maple
1958 Wasley, David L., 14 Orchard

THOMASTON 06787

1946 Conklin, Clifford T., Jr., 16 Grand
1947 Samson, Daniel P., 147 Elm
1922 Wight, Winfield Emmons, 24 Goodwin Court

TORRINGTON 06790

1970 Abbott, Jay Lewis, 106 Litchfield
1946 Adams, Arthur John, Charlotte Hungerford Hospital
1972 Aitken, Gloria Stone, 540 Litchfield
1972 Anderson, Todd Edmund, Charlotte Hungerford Hospital
1950 Atwood, Albert Sterling, 30 Peck Rd.
1972 Bernacki, Edward Joseph, Torrington Co., 59 Field
1966 Briggs, Robert Stewart, 30 Peck Rd.
1952 Brown, Freeman Fletcher, Jr., 540 Litchfield
1946 Buckley, John Littlefield, 148 Migeon Ave.
1950 Canniff, James Charles, 51 Main
1970 Curi Joseph F. J., Litchfield Hills Medical Center
1966 Danaher, Thomas H., 379 Prospect
1930 Danaher, Thomas Joseph, 379 Prospect
1960 Dolan, Virginia Louise, 95 McKinley
1946 Fabro, J. Alfred, 94 Church
1961 Farrell, Henry Francis, Peck Rd.
1963 Finn, Alfred Joseph, Jr., 379 Prospect
1972 Finnie, Jerrold Nelson, 1185 New Litchfield
1970 Galloway, John Alexander, 106 Litchfield
1931 Giobbe, Michael Edward, 355 Prospect
1969 Glenn, John Spellman, 24 Church
1936 Goldberg, Isadore Solomon, 24 Church
1906 Griswold, Maude Taylor, Wolcott Ter.
1966 Gulliver, Ashbel Green, 1185 New Litchfield
1966 Heinrich, Ward Dittmar, 24 Church
1949 Huvelle, Camille Henry, Peck Rd.
1954 Irwin, John Britton, 1185 New Litchfield
1947 Katzin, Benjamin, 30 Peck Rd.
1962 Kramer, Richard Thomas, 24 Mason
1973 MacDonald, Carlton A., Charlotte Hungerford Hospital
1953 McKenna, James Francis, 379 Prospect
1952 Meunier, John Louis, 24 Church
1942 Mitchell, Gerald Vincent, 185 Albert
1938 Murcko, William John, 253 Main
1971 Nesbitt, Kenneth A., Charlotte Hungerford Hospital
1923 Oelschlegel, Herbert Charles, 94 Alpert
1938 Orlowski, Andrew Williams, 64 Belleview Ave.
1966 Pimpinella, Ronald J., Litchfield Rd.
1923 Polito, Frank Leonard, 24 Church
1954 Polito, John Clarke, 24 Church
1949 Robertson, Alexander Rocke, P. O. Box 1107
1932 Samponaro, Nicholas, 241 Main
1974 Sansing, James G., 88 Litchfield
1973 Scalice, Robert Angelo, 30 Peck Rd.
1947 Smith, James Thomas, 148 Migeon Ave.
1966 Smith, Reginald Donald, Charlotte Hungerford Hospital
1957 Spencer, Susan Benedict, 19 Taylor Dr.
1962 Vanoni, Frank Robert, 379 Prospect
1953 Walker, Thomas H., 30 Peck Rd.

WASHINGTON 06793

1973 Clark, Morris Leo, On-the-Green
1968 Fearon, Henry Dana, Washington Green
1958 Hays, David R., Jr.

WASHINGTON DEPOT 06794

1946 Simonds, John Rolf, Box 228

WATERTOWN 06795

1946 Caney, Wilbur Hinds, 429 Main
1936 Cleary, Harold John, 16 Echo Lake Rd.
1951 Goerner, Jessamine Roberta, 404 Main
1949 Martin, Katharine Hawley, Butternut Lane
1936 Meyers, Royal Abbott, 210 Guernseytown Rd.
1970 Weber, Donald John, 459 Main

WINSTED 06098

1938 Baker, Philip George, 26 Elm
1969 Briggs, Harry Caldwell, 71 Spencer
1936 Cornelio, Francis Joseph, 45 Elm
1965 Dutton, Richard Sanders, 71 Spencer
1973 Filinson, Richard Neil, 64 Main
1973 Fletcher, Robert G., Winsted Memorial Hospital
1969 Gallo, Erly Paul, 10 Hinsdale Ave.
1937 Gallo, Francis, Medical Arts Building
1962 Husvet, Ferenc, 71 Spencer
1954 Izumi, Ernest Matson, R.F.D. No. 1
1936 Levy, Aaron, 26 Elm
1969 McCabe, Edward B., Winsted Memorial Hospital
1971 Munch, Richard Valentine, 71 Spencer
1968 Pierce, John M., 71 Spencer
1947 Reidy, Joseph Carey, 43 Walnut
1972 Sherman, Roy B., Rugg Brook Rd., R. F. D. 3
1969 Smith, Norman Eugene, Jr., 71 Spencer
1955 Tury, Leslie Akos, 71 Spencer
1974 Whelchel, Lynn W., Jr., 71 Spencer

WOODBURY 06798

1948 Cushman, George Lester, Judson Ave.
1967 Harkins, Robert William, Judson Rd.

OUT OF COUNTY

1954 Atchley, John Adams, 3 East 68th, New York City 10021
1938 Dobbs, William G. H., 13680 N.W. Roanoke Lane Portland, Oregon 97229
1942 Downs, Elinor Fosdick, Stoneleigh, Alger Court, Bronxville, New York 10708
1931 Evarts, Josephine, Millerton, New York 12546
1935 Kilgus, John Frank, Jr., 79 Elm, Hartford 06115
1960 Laning, George Michie, 3 Sky, Thompsonville 06082
1966 McCarthy, Joseph Clark, 518 S. Green River Rd., Evansville, Indiana 47715
1963 Mehri, Parviz Bozorg, Glen Hill Rd., Danbury 06810
1949 Meister, Louis Frederick, 1800 E. Ocean Blvd, S-6 Stuart, Florida 33494
1966 Mino, Manuel Eduardo, 119 Lantern Lane, Wethersfield 06109
1970 Montoni, Edward John, 5 Wintergreen La., West Simsbury 06092
1919 Reade, Edwin Godwin, 315 Knollwood Village, Southern Pines, North Carolina 28387
1942 Riendeau, Fernand Maurice, 14 Cromwell Ct., Old Saybrook 06475
1942 Riendeau, Pauline Laure, Cromwell, Old Saybrook 06475
1963 Vidone, Romeo Albert, 880 Racebrook Rd., Orange 06477
1942 Wallach, Gert M. K., 235 Grand, Waterbury 06720
1939 Wilcox, Lloyd M., 124 Main, Bristol 06010
1967 Zeffiro, Ronald Gordon, 40 Timrod Rd., West Hartford 06107

Middlesex County Association

President: Henry Sherwood, 195 South Main, Middletown 06457
Vice-President: Benjamin M. Shenker, 1251 South Main, Middletown 06457
Secretary-Treasurer: Sanford W. Harvey, Ballfall Rd., Middletown 06457
Councilor: W. Raymond James, 64A North Main, Essex 06426
Associate Councilor: Herbert Magram, 45 Crescent, Middletown 06457
Annual Meeting, Second Thursday in April
Semi-Annual Meeting, Second Thursday in October

CHESTER 06412

1935 Lieberman, David Leonard, West Main
1954 Wheeler, Gordon Bartlett, Kings Highway, R.F.D. No. 1

CLINTON 06413

1974 Kerr, Robert John Noel, 37 Commerce
1937 Rindge, Norman Pember, 147 East Main

CROMWELL 06416

1963 Adams, Henry Alexander, 384 Main
1958 Cornett, Samuel James, 8 Woodlawn Dr.
1934 Couch, Frank Hallock, 32 Prospect Hill Rd.
1969 Crowther, Daniel F. S., 269 Main
1940 Grant, Richard Francis, 482 Main
1972 Macionus, Raymond Francis, 269 Main
1928 Nelson, Walter Nathaniel, 360 Main
1967 Waldman, Arthur Leslie, 269 Main

DEEP RIVER 06417

1939 Lobb, Russell Albert, 1 Essex

DURHAM 06422

1964 Voelkening, Burkhard Wolfgang, Carriage Dr.

EAST HAMPTON 06424

1936 Gardner, Norman Homer, 25 Main
1934 Soreff, Louis, 9 West High

ESSEX 06426

1942 Ames, William Gard, 64A North Main
1972 Baldwin, David Bruce, Middlesex Tpke.
1971 Bardenheier, Joseph Alexander, Wildwood Medical Building
1967 Buebendorf, Donald Philip, Middlesex Tpke
1967 Burkle, Frederick Martin, Jr., Middlesex Tpke.
1971 Goetcheus, John Stewart, Middlesex Tpke.
1949 Harris, Augustus Ludlow, Hilltop Ave.
1948 James, Walter Raymond, 64A North Main
1973 Maron, Theodore William, Jr., Middlesex Tpke.
1954 Stanford, John, 64A North Main
1941 Twachtman, Eric, Plains Rd.

HIGGANUM 06441

1965 Havlicek, Joseph Anthony, Route 9
1948 Korab, John Joseph, High
1973 Pringle, Eleanor W., Killingworth Rd.

KILLINGWORTH 06417

1951 Bauer, William Frederick, Jr., Fire Tower Rd.

MIDDLEFIELD 06455

1947 Smith, Harold Ellsworth

MIDDLETOWN 06457

1973 Abad, Alex A., Connecticut Valley Hospital
1969 Adams, Richard, Shoreline Surgical Assoc., 195 South Main
1942 Alexander, Stanley Joseph, 760 Saybrook Rd.
1962 Arafeh, Mehadin Kamel, Connecticut Valley Hospital
1969 Arena, Anthony Joseph, 770 Saybrook Rd.
1952 Arnault, Donald George, 80 South Main
1960 Bellobuono, John R., 210 South Main
1971 Bertuch, Albert William, 195 South Main
1971 Buchalter, Daniel Joel, 80 South Main
1941 Buckley, Willard Emrich, 770 Saybrook Rd.
1969 Cerritelli, Dominick Henry, 45 Crescent
1963 Ceulemans, Cyril Peter, 770 Saybrook Rd.
1955 Chace, Charles Winslow, 760 Saybrook Rd.
1973 Clark, Samuel, Jr., 770 Saybrook Rd.
1942 Crampton, Clair Beebe, Wesleyan Univ.
1961 Daukas, Charles G., 124 Washington
1959 DeVille, Desmond Bancroft, 80 South Main
1972 Donadio, Joseph A., 80 South Main
1947 Epstein, Joseph I., 195 South Main
1972 Fiducia, Joseph Paul, 80 South Main
1969 Fischbein, Frederic Ian, 80 South Main
1962 Gallo, Sebastian John, Middlesex Memorial Hospital
1972 Ganguli, Prabhash Chandra, 28 Crescent
1971 Geiser, Frank M., Middlesex Memorial Hospital
1968 Gerz, Hans O., 75 Acer Dr.
1970 Ghaussy, Aziz A., 547 Main
1971 Gordon, Eric, P.O. Box 467
1967 Gorin, Malcolm, 195 South Main
1974 Hall, William A., Wesleyan Univ.
1920 Harvey, Carl Clifford, 20 Silver
1948 Harvey, Sanford W., Ballfall Rd.
1948 Harwood, Clarence W., 80 South Main
1968 Hickox, David Beattie, 80 South Main
1965 Kaufmann, Herbert Alfred, 770 Saybrook Rd.
1956 Kelly, John Francis, 770 Saybrook Rd.
1972 Kilga, Lawrence A., 80 South Main
1951 Korn, Francis Edwin, 195 South Main
1928 LaBella, Louis Onorato, 760 Saybrook Rd.
1969 Lambe, Michael Joseph, 11 Orchard Hill La
1964 Lambe, Thomas Peter, 70 Crescent
1973 Lee, John P., 80 South Main
1952 Levine, Herbert, 770 Saybrook Rd.
1965 Longo, Edward Anthony, 28 Crescent
1957 Magram, Herbert, 45 Crescent
1957 Manzi, Joseph Alexander, 80 South Main
1970 McCarthy, Robert Emmett, 80 South Main
1954 McDowell, Arthur Vennall, 28 Crescent
1963 McKay, Donald, 770 Saybrook Rd.
1940 McLeod, Christie Ellen, 28 Crescent
1966 Miller, Donald Edwin, 80 South Main
1934 Minor, Lloyd Wesley, 329 Coleman Rd.
1969 Nadel, Martin S., Middlesex Memorial Hospital
1939 Palmieri, Mario Lorenzo, 200 Coleman Rd.
1958 Pella, Juan, 243 Main
1956 Pennington, Robert Breece, 80 South Main
1965 Perlin, Louis, 170 Oakcliff Rd.
1959 Prins, Sal A., 67 Old Mill Rd.
1974 Rabuffo, Jeffrey Vincent, 770 Saybrook Rd.
1943 Rafkind, Abraham Benjamin, 212 Hunting Hill Ave.
1972 Rich, Charles F., 141 Broad
1972 Robbins, Kenneth Mark, 760 Saybrook Rd.
1965 Rosenbaum, Howard T., Middlesex Memorial Hospital
1933 Schwartz, Philip Edward, 195 South Main
1957 Sheehan, Felix Gerard, 589 Saybrook Rd.
1945 Shenker, Benjamin Morton, 1251 South Main
1947 Sherman, Benjamin, Connecticut Valley Hospital
1940 Sherwood, Henry, 195 South Main
1970 Silberstein, Allen B., 28 Crescent
1968 Sosa, Juan B., 109 Broad
1929 Speight, Harold Edmund, 70 Crescent
1969 Stoane, Leonard, Middlesex Memorial Hospital
1924 Sweet, Alfred Norton, 770 Saybrook Rd.
1957 Sweet, Richard Tallmadge, 770 Saybrook Rd.
1949 Thomson, Archibald Wilson, Jr., 80 South Main
1946 Thumim, Mark, 760 Saybrook Rd.
1947 Toll, Nina, Box 413 06458
1973 Torop, Paul, 109 Broad
1933 Tracy, F. Erwin, 195 South Main
1954 Turano, Andrew Frank, 80 South Main
1967 Twiss, Harry Younger, Ballfall Rd.
1942 Vinci, Vincent John, 770 Saybrook Rd.
1961 Welling, Searle Kistler, 80 South Main
1957 Wright, John Cardwell, 80 South Main
1967 Yue, James Kar-Kee, 80 South Main
1971 Zavod, Robert, 1 Yellow Birch Rd.
1974 Zavod, William A., 259 Prout Hill Rd.
1974 Zelinka, Miloslav, Wesleyan Univ.

MOODUS 06469

1946 Berwick, Philip, Box 19
1963 Paardenkooper, John, Falls Rd.

OLD SAYBROOK 06475

1971 Cook, Donald Edward, 840 Boston Post Rd.
1934 Greenberg, Aaron, 226 Main
1969 Gritzmacher, Richard Orlen, 840 Boston Post Rd.
1956 Irving, William David, 12 Old Boston Post Rd.
1961 Pernetti, Anthony Miles, 496 Maple Ave.
1946 Saunders, George Robert, P. O. Box 92
1971 Sheehan, Bernard F., 263 Main
1967 Wollack, Anne Carolina, Saybrook Convalescent Hospital

PORTLAND 06480

1968 Andrus, Wayne Burton, Stonegate Dr.
1960 Ballard, Claude James, 8 Butler La.
1954 Barton, Donn Coleman, 506 Main
1966 Coe, Margaret J., 2 Redberry Lane
1963 Dooley, John A., Grace Lane
1959 Gray, Philip, 9 Hall Hill Rd.
1947 Longo, Americo Domenico, 344 Main
1941 Ryan, V. Gerard, 333 Main
1964 Spalding, Peter Edward, Penfield Hill Rd.

OUT OF COUNTY

1948 Baker, Asher Lael, P. O. Box 625, Park Lane, Sheffield, Massachuetts 01257
1954 Burns, Julianna Ludwick, P. O. Box 111, Hadlyme 06439
1928 Compson, Florence Eberly Mentzer, College Hill Rd., Clinton, New York 13323
1970 Concannon, Patrick R., W.W. II Veterans Hospital Meriden 06450
1972 Hessler, Paul C., Danbury Hospital, Danbury 06810
1944 Katzenstein, Rolf Ewald, 1216 Cheshire, Cheshire 06410
1974 Landow, Stephen S., 2 Chapel Dr., Pine Orchard, Branford 06405

1970 Martinson, Edgar O., 47 Shorelands Dr., Madison 06443
1971 Reed, Robert Leslie, 20 Crestview Dr., North Haven 06473
1926 Russman, Charles, 450 Golden Isles Dr., Apt. 2A, Hallandale, Florida 33009

New Haven County Association

President: Gioacchino S. Parrella, 2044 Bridgeport Ave., Milford 06460
Vice-President: George A. Bonner, 114 Sherman Ave., New Haven 06511
Executive Director: William L. West 362 Whitney Ave., New Haven 06511
Councilor: Jerome K. Freedman, 1423 Chapel, New Haven 06511
Associate Councilors John J. Mendillo, 45 Trumbull, New Haven 06510
Mehdi S. Eslami, 1389 West Main St., Waterbury 06708
Business office: 362 Whitney Ave., New Haven 06511
Annual Meeting, Fourth Thursday in March
Semi-Annual Meeting, Thursday in October

ANSONIA 06401

1961 Aguiar, Jose Carlos, 121 Wakelee Ave.
1964 Cimmino, Gerald Nicholas, 121 Wakelee Ave.
1973 Flores, Jose C., 121 Wakelee Ave.
1946 Haddad, Fred Melad, 112 Pershing Dr.
1954 Hoffer, John Mathew, 121 Wakelee Ave.
1961 Lin, Paul Tong Chang, 121 Wakelee Ave.
1969 Pavlo, Ludwig Joseph, 121 Wakelee Ave.
1969 Pavlo, Maria Margarete, 121 Wakelee Ave.
1942 Pepe, Anthony James, 3 Marshall Lane
1932 Renehan, John Michael, 1 Kingston
1964 Shapiro, Bernard Seymour, 121 Wakelee Ave.
1966 Smiley, Sheldon S., 121 Wakelee Ave.

BETHANY 06525

1960 Donnelly, John Emmitt, Clay Rd.
1953 Kleeman, James Allen, Bethmour Rd.
1973 Milano, Ann F., Amity Rd.

BRANFORD 06405

1934 Blanchard, Dana Lincoln, 687 Main
1966 Feola, Benjamin John, 117 South Main
1945 Gencarelli, Alphonse Frank, 25 Woodside Dr.
1955 Goldenring, Herbert, 62 Kirkham
1962 Levy, Harold David, 140 Montowese
1929 Levy, Nathan, 140 Montowese
1943 Lindskog, Gustaf Elmer, 38 Griffing Pond Rd.
1956 Nickou, Nickolas, 687 Main
1966 Rosenbloom, Marshall Lewis, 62 Kirkham
1946 Rosenthal, Richard Louis, 687 Main
1962 Scherr, Edward Stanley, 960 Main
1974 Scheuer, Alfred Quinn, 62 Kirkham
1958 Zimmerman, Marvin Paul, 960 Main

CHESHIRE 06410

1952 Armbruster, Lois Deming, Main
1953 Butler, Robert William, 146 Park Pl.
1949 Dayton, Charles John, 15 Chipman Dr.
1963 Grycz, Henry J., 432 Maple Ave.
1963 Heiger, Arnold Alexander, 1175 South Main
1960 Kramer, Fred Michael, 366 South Main
1959 Mack, Gerhard T., 577 South Main
1973 Miller, Mary Margaret, 577 South Main
1960 Mirkhani, Mahmood, 1175 South Main
1923 Moore, Wilbur John, 15 Chipman Dr.
1940 Neff, William Everett, Jr., 93 Main
1939 Oxnard, Edward Warren, 15 Chipman Dr.
1974 Sataline, Lee R., 209 Highland Ave.
1971 Smith, Robert Pease, 612 South Brooksvale Rd.

DERBY 06418

1970 Baker, Earl Lewin, 314 Elizabeth
1968 Boltax, Robert Stanley, 299 Seymour Ave.
1968 Bratu, Marcel, 445 New Haven Ave.
1971 Brown, William Tibor, 314 Elizabeth
1969 Cadelina, Wilfredo Enriquez, 130 Division
1969 Davidson, Alan Cahn, 445 New Haven Ave.
1956 DeLuca, Vincent Alfred, Jr., 130 Division
1966 Dineen, Joseph Patrick, 299 Seymour Ave.
1958 Doheny, James Joseph, 299 Seymour Ave.
1960 Donnelly, June F., 445 New Haven Ave.
1958 Filan, James Kieran, 272 Main
1966 Gagliardi, Joseph Matthew, Jr., 67 Maple Ave.
1946 Galen, Jack Harris, 445 New Haven Ave.
1966 Habib, Nabil Iskander, 299 Seymour Ave.
1958 Herbordt, W. Alexander, Griffin Hospital
1957 Holden, Jack, 445 New Haven Ave.
1963 Laubstein, Melvin Bernard, 56 Minerva
1971 Lawson, Jack Philip, Griffin Hospital
1970 Levy, Richard Martin, 67 Maple Ave.
1973 Marc, Radoslav, 314 Elizabeth
1957 Manjoney, Richard Charles, 56 Minerva
1959 Milazzo, Nicholas Joseph, 299 Seymour Ave.
1961 Miller, Dwight Frank, Griffin Hospital
1971 Myerson, Daniel Allen, Griffin Hospital
1971 Myerson, Paul J., Griffin Hospital
1944 Narowski, John Joseph, 17 Elizabeth
1910 Parlato, Michael Antonino, 101 Sentinel Hill Rd.
1955 Petrie, Stewart Judson, 56 Minerva
1925 Rentsch, Samuel Burton, 61 Seymour Ave.
1972 Samuels, Jesse David, 314 Elizabeth
1964 Sikorski, Jerzy Jan, Griffin Hospital
1967 Silverstein, David M., 5 Maple Ave.
1968 Stier, Stanley D., 435 New Haven Ave.
1958 Wirth, Michael Nahum, 58 Minerva

DEVON 06462

1957 Hunter, Paul, 97 Housatonic Dr.
1947 Malone, Robert Francis, 21 Rivercliff Dr.

EAST HAVEN 06512

1950 Albis, Francis Joseph, 60 Edward
1952 Albis, Michael Daniel, 60 Edward
1940 Balletto, Vincent 535 Thompson Ave.
1940 Garofalo, Mario Louis, 80 Morgan Ave.
1961 Mancini, Anthony D., 176 Tyler
1924 Taylor, Robert Mitchell, 578 Thompson Ave.
1953 Van Eck, Willem Frederik, 228 Main
1954 Vermande, Gertrude Joanna, 228 Main

GUILFORD 06437

1951 Adams, Elisabeth C., On the Green
1963 Brogden, John Malcolm, 152 Broad
1972 Cohen, Selywn Alan, 150 Boston
1958 Cunningham, Peter Ritsher, 152 Broad
1974 Cwik, Ronald Arthur, 152 Broad
1948 Horton, William Hanson, Falcon Rd., Sachem's Head
1952 Igersheimer, Walter Wilhelm, 111 Dolan Dr.
1971 Johnson, David Porter, 113 Water
1971 Lowry, Elizabeth C., 152 Broad
1970 McGrath, Brian John, 29 Whitfield
1954 Mermann, Alan Cameron, 152 Broad
1963 Wakeman, Edward Maurice, 152 Broad

NORTH GUILFORD 06437

1960 Ventimiglia, Joseph J., 1304 West

HAMDEN

1958 Arnstein, Robert Leo, 79 Killdeer Rd. 06517
1955 Bellis John Marvin, Jr., 2804 Whitney Ave. 06518
1962 Brady, James Joseph, 2447 Whitney Ave. 06518
1955 Coe, Ronald Eliot, 1727 Whitney Ave. 06517
1973 Cohn, George Louis, 67 Charlton Hill 06518
1953 Colwell, Bradford Stevens, 299 Washington Ave. 06518
1936 Corey, Walter Van Arsdale, 1188 Whitney Ave. 06517
1936 Culotta, Charles Salvatore, 2714 Whitney Ave. 06518
1964 Della Valle, Louis, 1199 Whitney Ave. 06517
1961 Ferranti, Redento D., 2458 Whitney Ave. 06518
1969 Fezza, Andrew John, 2572 Whitney Ave. 06518
1956 Fezza, Michael Lawrence, 2572 Whitney Ave. 06518
1959 Fischer, Daniel George, 99 Circular Ave. 06514
1970 Fishbone, Gerald, 50 Myra Rd. 06517
1973 Ghofrany, Fereshteh Naghshineh, 299 Washington Ave. 06518
1972 Ghofrany, Shukrullah, 299 Washington Ave. 06518
1971 Gilliam, Mary Ann, 1732 Whitney Ave. 06517
1948 Greenhouse, H. Robert, 1214 Dixwell Ave. 06514
1949 Haley, John Carlin, 295 Washington Ave. 06518
1972 Hambly, Robert Gagnon, 1100 Dixwell Ave. 06514
1951 Hart, Robert W., 295 Washington Ave. 06518
1922 Hillman, Maurice Manuel, 39 Helen 06514
1971 Hyland, John, 200 Westwood Rd. 06518
1967 Jones, Charles Ray, 295 Washington Ave. 06518
1966 Kay, Foster, 2447 Whitney Ave. 06518
1946 Kertesz, Johann, 1110 Still Hill Rd. 06518
1949 La Femina, Nicholas Francis, 60 Dawes Ave. 06517
1972 Langenauer, Bernard J., 35 Lincoln 06518
1961 Levenstein, Marvin, 1797 Whitney Ave. 06517
1970 Levis, Albert Jesula, 295 Washington Ave. 06518
1956 Loewald, Elizabeth Longshore, 2 Bayberry Rd. 06517
1942 McKeon, James Joseph, 1828 Dixwell Ave. 06514
1940 Mendelsohn, William, 35 Fennbrook Dr. 06517
1953 Milone, Henry Saverius, 1876 Whitney Ave. 06517
1954 Newton, Robert Floyd, 2508 Whitney Ave. 06518
1932 Nodelman, Jacob, 835 Mix Ave., Apt. 406 06514
1938 Parente, Leonard, Hamden Town Hall 06518
1952 Pious, William Leon, 75 River Rd. 06518
1961 Polsky, Elliot, 1100 Dixwell Ave. 06514
1949 Radowiecki, M. Walter, 196 Corbin Rd. 06517
1956 Rubin, Arthur A., 5 Hearn Lane 06514
1914 Russell, Thomas H., 46 Jackson Rd. 06517
1971 Saracco, Fernando P., 2458 Whitney Ave. 06518
1958 Schlessel, Theodore Elliot, 1100 Dixwell Ave. 06514
1948 Scholhamer, Charles Frederick, 9 Killdeer Rd. 06517
1972 Silverman, Nira Rubin, 91 Corbin Rd. 06517
1946 Slater, Daniel, 1100 Dixwell Ave. 06514
1927 Slater, Morris, 1100 Dixwell Ave. 06514
1946 Snoke, Albert Waldo, 100 Santa Fe Ave. 06517
1966 Tjimis, Pavlos Demetriou, 2447 Whitney Ave. 06518
1947 Trifari, Leopold Mariano, 55 Ranch Rd. 06517
1943 Verstandig, Charles Coleman, 19 Filbert 06517
1945 Waldemer-Kertesz, Johanna, 1110 Still Hill Rd. 06518
1961 Zale, Charles, 2331 Whitney Ave. 06518

MADISON 06443

1968 Becker, Robert E., 107 East Wharf Rd.
1946 Birnbaum, Hyman Bunge, Boston Post Rd.
1968 Federico, John Vincent, 94 Five Fields Rd.
1947 Green, Robert H., 26 Lovers Lane
1943 Rindge, Mila Elizabeth, 809 Boston Post Rd.
1932 Robinson, Albert James, R.F.D. No. 3, Willard Ave.
1967 Sklaire, Martin William, Wall

MERIDEN

1963 Abrahams, Irwin Willard, 95 East Main 06451
1965 Albert, Marvin, W. W. II Veterans Mem'l Hospital 06450
1974 Alonso, Luis, 285 Broad 06450
1950 Badner, Donald, Harold, 405 Broad 06452
1965 Bohan, Gunar N., 165 Miller 06450
1950 Broady, Harold, 405 Broad 06452
1959 Brown, Marion R. S., 95 East Main 06451
1947 Brown, Patrick Neely, 95 East Main 06451 and 133 Main, Bristol 06010
1948 Burbank, John, 335 Cook Ave. 06450
1969 Burch, Peter George, 477 South Broad 06450
1955 Butenas, Carl, 319 Hanover 06450
1929 Campbell, Sherburne, 1192 East Main 06451
1962 Campione, Matthew Philip, 405 Broad 06452
1937 Carey, William Clark, 377 Broad 06450
1962 Cocilovo, Vincenzo, Undercliff Mental Health Center 06450
1973 Concannon, Patrick Ronald, W.W. II Veterans Hospital 06450
1967 Conroy, Michael M., 473 Broad 06450
1949 Cusnir, Marion, 110 Colony 06450
1948 Dickinson, George Herbert, 199 West Main 06450
1946 DiGiandomenico, Albert Theodore, 95 East Main 06451
1956 Esposito, Michael Joseph, 379 Oregon Rd. 06450
1950 Flynn, Charles Thomas, Jr., 140 Green Rd. 06452
1948 Flynn, John Benedict, 377 Broad 06450
1940 Fox, George Graham, 140 Green Rd. 06452
1967 Franz, Adolph II, 140 Green Rd. 06452
1973 Friedman, Stanley Ira, 219 West Main 06450
1964 Fritz, Harvey Lawrence, 219 West Main 06450
1946 Giddings, James Curtis, 412 South Broad 06452
1946 Glike, Frederick Philip, 12 Linsley Ave. 06450
1966 Goodman, Joseph Louis, 219 West Main 06450
1972 Gottlieb, Marvin B., 95 East Main 06450
1967 Guttenberg, Irving, 219 West Main 06450
1929 Hall, William Edward, 5 South Broad Ter. 06450
1959 Hennessey, John Francis, 181 Cook Ave. 06450
1957 Kahn, Daniel, 130 East Main 06451
1970 Kaplan, Harold Paul, 219 West Main 06450
1941 Katz, Irving, 304 Broad 06452
1944 Krochmal, Henry, P. O. Box 942 06450
1973 Lehrman, Jerrold C., 377 Broad 06450
1939 L'Heureux, Jerome Arthur, 405 Broad 06452
1934 Lirot, Stephen L., 53½ West Main 06450
1946 Lohrmann, Walter, 11 Live Oak Lane 06452
1972 MacRae, Douglas William, 477 South Broad 06450
1973 Maleh, Jack Daoud, Webb Manor, Apt. 14, Gravel 06450
1970 McGann, Robert Farquharson, 224 Cook Ave. 06450
1934 Misuk, Joseph Francis, 430 Broad 06452
1972 Moreschi, Francesco Panfilo, 199 West Main 06450
1972 Morrison, Robert Francis, 285 Broad 06450
1960 O'Regan, Patrick Tobias, 24 Columbus Ave. 06450
1969 Osadchey, Lance M., 108 Sweet Birch Dr. 06450
1920 Otis, Israel, 292 Thorpe Ave. 06450
1966 Paggioli, John William, 728 Paddock Ave. 06450
1956 Parke, David William, 477 South Broad 06452
1960 Patterson, Earl Stewart, 236 West Main 06450

1952 Pepe, Vincent, 71 Parker Ave. 06452 and 26 Fair, Wallingford 06492
1954 Persons, Ray E., 71 Parker Ave. 06452
1931 Pierson, Louis A., 199 West Main 06450
1967 Pratt, Hamp Smead, 377 Broad 06450
1966 Pyun, Kyum Sik, 181 Cook Ave. 06450
1973 Ritter, Maria Elisabeth, Meriden Memorial Hospital 06450
1947 Robb, Samuel Aloysius, 285 Broad 06450
1966 Russell, Brigid Ita, 81 Carpenter Ave. 06452
1966 Russell, William, 285 Broad 06450
1966 Scheer, Carl Weston, 335 Cook Ave. 06450
1956 Schurgast, Anselm W., 130 East Main 06451
1972 Sherwin, Carl P., Jr., 377 Broad 06450
1968 Shiffman, Irving, 219 West Main 06450
1954 Sillman, Eugene, 67 Lambert 06450
1942 Smith, Edward Rice, 543 West Main 06450
1957 Tonkonow, Francis Harold, 140 Green Rd. 06452
1950 Trent, Sophie Clara, 96 Boylston, North 06451
1963 Wagshul, Ely Cutler, 285 Broad 06450
1956 Wallace, Edward Paez, 285 Broad 06450
1946 White, Howard Thomas, 84 Live Oak Lane 06452
1971 Willett, Leo Vincent, Jr., 140 Green Rd. 06450
1921 Wilson, James Alfred, 128 Alexander Dr. 06450
1954 Zimerman, Joseph, 319 Hanover 06450

MIDDLEBURY 06762

1953 Arnold, William Parsons, Jr., White Deer Rock Rd.
1939 Hinchey, Richard James, Westwood Dr.
1957 Liao, Sung Jwi, Sky Line Dr.
1941 Riccio, Joseph S., Blueberry Knoll

MILFORD 06460

1934 Andrus, Oliver Burton, P. O. Box 415
1970 Baird, William Hennings, 105 North
1938 Barney, Walter Edward, 2044 Bridgeport Ave.
1974 Baron, Michael Austin, 75 New Haven Ave.
1970 Boyd, John Edward, 280 Broad
1956 Brandt, Allan Adolph, 2047 Bridgeport Ave.
1972 Brothers, David M., 135 Cherry
1949 Buckman, Robert Francis, 2068 Bridgeport Ave.
1967 Chastanet, Denis Vernon Peter, 54 Darina Pl.
1957 Chiappinelli, Dante, 2044 Bridgeport Ave.
1969 Coassin, Nicholas Angelo, 75 New Haven Ave.
1962 Coppes, Henri R., 280 Broad
1963 Corsaro, Theodore Pascal, 2044 Bridgeport Ave.
1968 De Negre, Louis Mark, 2044 Bridgeport Ave.
1947 Elgosin, Richard B., Milford Hospital
1959 Fink, Howard David, 75 New Haven Ave.
1959 Fox, Marvin Irving, 122 Broad
1974 Grote, Marvin Irwin, 2044 Bridgeport Ave.
1959 Gruskay, Frank Louis, 1 Golden Hill
1963 Hare, Edward Treen, Jr., 21 Cherry
1960 Hyland, Francis Joseph, 284 Broad
1960 Janet, Samuel J., 234 Broad
1964 Keegan, James Thomas, 89 Broad
1959 Kerin, Robert, 112 Broad
1944 Langner, Helen P., 1 Shipyard Lane
1946 Lipkoff, Clarence Joseph, 2068 Bridgeport Ave.
1955 Martin, Waldo Emerson, 33 North
1972 Meia, Harley B., 122 Broad
1966 Messore, Giacomo, Milford Hospital
1973 Milano, Madelyn Frances, 181 Melba
1971 Naiman, Peter T., 112 Broad
1962 Nuland, Sherwin B., 2044 Bridgeport Ave.
1971 Pardi, Maria-Teresa, 123 Cedar Hill Rd.
1973 Pardi, Victor Morris, 123 Cedar Hill Rd.
1946 Parrella, Gioacchino, 2044 Bridgeport Ave.
1964 Philbrick, Clement John, Jr., 284 Broad
1953 Rapoport, Leonard M., 75 New Haven Ave.
1959 Shelling, Richard Lawrence, 1 Golden Hill
1964 Stein, Michael Lewis, 1 Golden Hill
1933 Stetson, Harry Warren, 46 Robert Treat Pkwy.
1954 Thompson, Maurice Bainton, 2068 Bridgeport Ave.
1956 Tierney, James William, 221 Broad
1946 Timm, Alexander Berthold, Jr., 36 West Main
1955 Van Derwerker, Earl Edward, Jr., Milford Hospital
1947 Weston, Robert Alphaeus, Jr., 2068 Bridgeport Ave.
1968 Winters, Barry Michael, 73 Golden Hill
1964 Wolfson, Alvin, 284 Broad
1969 Yoon, Hee R., 2044 Bridgeport Ave.

NAUGATUCK 06770

1963 Cornacchia, Rocco, 567 Field
1963 Elser, John Peter, Church
1968 Falk, Maurice, 577 North Church
1958 Gerber, Edward, Jr., 305 Church
1955 Hill, William Edward, Jr., 150 Meadow
1963 Labriola, Gerald, 577 North Church
1972 Ransome, Oscar John, 577 North Church
1940 Tylec, Leo Louis, 156 Meadow
1926 Williams, Edward Everett, 580 Hillside Ave.

NEW HAVEN

1970 Albert, Daniel Myron, 789 Howard Ave. 06504
1945 Albom, Jack Jonathan, 2 Church South 06519
1964 Albright, James A., 789 Howard Ave. 06504
1953 Alderman, Donald Bruce, 100 York 06511
1960 Alpert, Abraham Edward, 301 Orchard 06511
1967 Altshul, Victor A., 58 Trumbull 06510
1932 Amatruda, Frank Gabriel, 459 Orange 06511
1955 Ameen, Lane, 210 Prospect 06511
1964 Amore, Frederick Robert, 614 Orange 06511
1969 Anderson, Frederick Paffard, 150 Sargent Dr. 06511
1972 Anderson, Gerald G., 333 Cedar 06510
1965 Arons, Marvin Shield, 2 Church South 06519
1968 Asis, Jose, 301 Orchard 06511
1969 Atocha, Jose, 1435 Chapel 06511
1971 Baker, Sidney MacDonald, 150 Sargent Dr. 06509
1972 Balsam, Rosemary Harriett, 17 Hillhouse Ave. 06520
1954 Baratz, Merrill A., Yale Health Service 06520
1955 Barile, Albert William, 310 Winthrop Ave. 06511
1973 Barse, Richard Joseph, 1308 Chapel 06511
1973 Bartlett, Edward W., 357 Whitney Ave. 06511
1957 Baskin, Arnold M., 111 Park 06511
1930 Batelli, Clement Francis, 328 Townsend Ave. 06512
1955 Batt, Harold David, 301 Orchard 06511
1925 Battista, Anthony William, 111 Osborn Ave. 06511
1963 Beatrice, Marianne Angela, 6 Kensington 06511
1965 Bender, Morton, 100 York 06511
1940 Berlowe, Max Llewellyn, 2 Church South 06519
1949 Berman, Sidney, 123 York 06511
1944 Berneike, Robert R., 878 Howard Ave. 06519
1963 Berte, John Bernard, 1435 Chapel 06511
1955 Billings, William Clarke, Yale Health Service 06520
1940 Biondi, Benedict, 120 Blatchley Ave. 06513
1969 Boltax, Sandra Parzow, 333 Cedar 06510
1954 Bonner, George Arthur, 111 Sherman Ave. 06511
1960 Bove, Joseph Richard, Yale-New Haven Hospital Blood Bank, P. O. Box 1001
1963 Bradburn, Hubert Benjamin, 123 York 06511
1971 Bradford, Kenneth Alan, 2 Church South 06519
1967 Branch, James Christian, P. O. Box G, Westville Station 06515
1951 Brand, Elliott Saul, 123 York 06511
1967 Braverman, Irwin Merton, 333 Cedar 06510
1971 Brink, Adolph Joseph, 227 Church 06510

1962 Brochin, Malcolm, 186 Sherman Ave. 06511
1956 Brodoff, Stanley S., 2 Church South 06519
1935 Brody, Bernard Stephen, 114 Sherman Ave. 06511
1963 Brubaker, Robert Erb, 275 Winchester Ave. 06511
1946 Bruno, Joseph Julius, 1266 Forest Rd. 06515
1970 Burrow, Gerald Noel, 333 Cedar 06510
1943 Calabresi, Massimo, 300 Ogden 06511
1957 Cameron, Norman Alexander, 111 Park 06511
1960 Camilleri, Joseph Angelo, 878 Howard Ave. 06519
1957 Cappucci, Louis William, 116 Avon 06511
1916 Carelli, Genesis Frank, 256 Yale Ave. 06515
1972 Carlson, David Adelbert, 135 Whitney Ave. 06510
1949 Carter, Max George, 670 George 06510 and 3 Second Ave., Waterbury 06710
1964 Cassin, Carl Michael, 2 Church South 06519
1946 Castiglione, Frank Michael, 41 Trumbull 06510
1932 Celentano, Luca Eugene Humbert, 442 Elm 06511
1961 Chang, Suk Choo, 210 Prospect 06511
1946 Cheney, Charles Brooker, 111 Park 06511
1956 Chetrick, Allen, 2 Church South 06519
1947 Cipriano, Anthony Pasquale, 451 Orange 06511
1937 Clark, Mildred Helen, 244 Sherman Ave. 06511
1938 Clarke, Clement Cobb, 240 Bradley 06510
1946 Clement, David Hale, 2 Church South 06519
1935 Climo, Samuel, 291 Whitney Ave. 06511
1950 Cohart, Edward M., 60 College 06510
1971 Cohen, Lawrence Sorel, 333 Cedar 06510
1924 Cohen, William, 1435 Chapel 06511
1971 Cole, Jack Westley, 333 Cedar 06510
1964 Cole, Ransey Guy, 432 Dixwell Ave. 06511
1951 Coleman, Jules Victor, 135 Whitney Ave. 06510
1968 Collins, William Francis, 333 Cedar 06510
1921 Colwell, Howard Spencer, 64 Cold Spring 06511
1931 Connolly, Arthur James, 186 Sherman Ave. 06511
1958 Conte, Bernard Lewis, 598 George 06511
1961 Conte, Harry Charles, 598 George 06511
1939 Conte, Mario Gero, 1435 Chapel 06511
1943 Conway, David Francis, Jr., 111 Sherman Ave. 06511
1970 Cooper, Richard Arnold, 315 Whitney Ave. 06511
1973 Coppola, Paul Joseph, 100 York 06511
1931 Corradino, Charles Louis, 2 Church South 06519
1955 Cousins, Marvin Lee, 1308 Chapel 06511
1967 Cronin, Michael Thomas Ignatius, 67 Edgehill Rd. 06511
1952 Cusanelli, Gabriel Nicholas, 235 Bishop 06511
1940 Cutler, Hermann Shepard, 1308 Chapel 06511
1941 D'Alessio, Charles Magno, 301 Orchard 06511
1924 Dallas, Marion, 248 Bradley 06510
1935 D'Amico, Michael, 309 Edwards 06511
1971 Dann, Oliver Townsend, 190 Everit 06511
1951 Davey, Lycurgus Michael, 2 Church South 06519
1958 Davis, Clarence Daniel, 333 Cedar 06510
1973 DeDios, Victor K., 235 Bishop 06511
1942 de Forest, Gideon Knapp, 309 Edwards 06511
1951 Delgrego, Arthur L., 301 Orchard 06511
1951 D'Elia, Pierino Francis, 1423 Chapel 06511
1962 Del Pizzo, Alphonse, 1423 Chapel 06511
1964 Demir, Peter, 2 Church South 06519
1967 DePonte, Ralph Joseph, 123 York 06511
1935 D'Esopo, Joseph Nicholas, 614 Orange 06511
1943 de Suto-Nagy, Ilona Krasso, 139 Alston Ave. 06515
1956 Dolinsky, Albert Harold, 2 Church South 06519
1972 Dowaliby, James Michael, II, 2 Church South 06519
1965 Downing, Lewis Clinton, 1488 Chapel 06511
1948 Dwyer, Hugh Leo, Jr., 2 Church South 06519
1973 Dy, Antonio Jao, 106 Park 06511
1954 Ebbert, Arthur, Jr., 333 Cedar 06510
1969 Edelson, Marshall, 333 Cedar 06510
1956 Edwards, Herbert R., 166 Linden 06511
1954 Emery, Felice Menuez, 315 Whitney Ave. 06511
1967 Esdaile, Wilbur Walter, 466 Dixwell Ave. 06511
1968 Etkind, Edward Lawrence, 1546 Chapel 06511
1946 Etkind, Meyer George, 1546 Chapel 06511
1925 Evans, Theodore Schlosser, 309 Edwards 06511
1970 Fabbri, Remo, Jr., 31 High 06510
1971 Farber, Leonard Raymond, 111 Park 06511
1968 Farmer, Douglas Alexander, 1450 Chapel 06511
1950 Fasanella, Rocko Michael, 842 Howard Ave. 06519
1957 Fasano, Leonard Alfonse, 980 Whalley 06515
1964 Fazzone, Philip Robert, 670 George 06511
1968 Fearon, Richard Eubanks, 2 Church South 06519
1969 Fenn, John E., P.O. Box 1001, Yale-New Haven Hospital 06504
1966 Fenton, Robert H., 1423 Chapel 06511
1966 Ferando, Louis John, 1427 Chapel 06511
1973 Fessel, Jon Michael, 111 Park 06511
1951 Filer, Harry Lambert, Jr., 1423 Chapel 06511
1966 Fischer, David Seymour, 111 Park 06511
1969 Fischer, James J., 789 Howard Ave. 06504
1929 Fiskio, Peter William, 215 Whitney Ave. 06511
1948 Fitzpatrick, Eugene Joseph, 111 Park 06511
1973 Flagg, Stephen Vreeland, 111 Park 06511
1972 Flamm, Gerald Howard, 1450 Chapel 06511
1954 Fleck, Stephen, 333 Cedar 06510
1929 Flynn, Harold Aloysius, 464 Dixwell Ave. 06511
1953 Flynn, John Hine, 41 Trumbull 06510
1950 Forman, Joseph Bernard, 874 Howard Ave. 06519
1953 Fournier, Reginald E., 338 Alden Ave. 06515
1956 Frankel, Saul Arnold, 2 Church South 06519
1953 Frechette, Eugene Joseph, Jr., 1441 Chapel 06511
1963 Freedman, Jerome Kenneth, 1423 Chapel 06511
1951 Freedman, Morris, 169 Davenport Ave. 06519
1972 Freehill, Patrick J., 357 Whitney Ave. 06511
1936 Freeman, David, 210 Prospect 06511
1962 Friedman, Cyrus Robert, 65 Trumbull 06510
1940 Friedman, Irving, 860 Howard Ave. 06519
1941 Fuldner, Russell Victor, 178 Sherman Ave. 06511
1937 Gentile, Angelo Louis, 1488 Chapel 06511
1937 German, William John, 2 Church South 06519
1923 Gettings, James Augustus, 1334 Chapel 06511
1951 Gibson, Fred, 123 York 06511
1953 Glaser, Gilbert H., 333 Cedar 06510
1947 Glaser, William, 2 Church South 06519
1955 Glassman, Irving, 186 Sherman 06511
1926 Glazer, Morris, 71 Edgewood Way 06515
1974 Glickman, Morton G., Yale-New Haven Hospital 06504
1949 Glenn, William W. L., 333 Cedar 06510
1941 Godfried, Milton Simons, 85 Trumbull 06511
1947 Goetsch, John Black, 878 Howard Ave. 06519
1972 Goldblatt, Phillip Brian, 315 Whitney Ave. 06511
1957 Goldenberg, Ira Storin, 333 Cedar 06510
1958 Goldenthal, Sumner, 2 Church South 06519
1963 Goldstein, Jacob, 517 Ellsworth Ave. 06511
1954 Goldstein, Paul Stanley, 2 Church South 06519
1951 Golia, Ulysses Vitalio, 1423 Chapel 06511
1964 Goodman, Alan Herman, 2 Church South 06519
1971 Goodrich, Isaac, 2 Church South 06519
1950 Goodyer, Allan Victor, 333 Cedar 06510
1954 Gordon, Martin Eli, 111 Sherman Ave. 06511
1952 Gordon, Robert Stanton, 111 Park 06511
1968 Gottlieb, Felix Isaac, 1484 Chapel 06511
1941 Granoff, Morris Aaron, 327 Whalley Ave. 06511
1967 Greenberg, Alvin Donald, 2 Church South 06519
1955 Greene, Nicholas M., 789 Howard Ave. 06504
1924 Greenhouse, Barnett, 129 Whitney Ave. 06510
1960 Greenspan, Richard Henry, 333 Cedar 06510

1958 Greenwald, Willard F., Jr., 111 Park 06511
1927 Groark, Joseph Anthony, 145 Grand Ave. 06513
1939 Guida, Francis Paul, 1441 Chapel 06511
1964 Gurwitt, Alan Richard, 315 Whitney Ave. 06511
1973 Hamaty, Daniel, 1303 Chapel 06511
1970 Hammond Graeme L., 333 Cedar 06510
1962 Handler, Seymour L., 85 Trumbull 06511
1936 Hankin, Morris Albert, 315 Whitney Ave. 06511
1967 Hansen, Thomas Wilcox, 2 Church South 06519
1931 Harrison, Elizabeth Ross, 255 Bradley 06510
1953 Harvard, Bell Marvin, Jr., 2 Church South 06519
1952 Harvey, Richard Bennett, 251 Edwards 06511
1954 Hayes, Mark Allen, 333 Cedar 06510
1957 Hehre, Frederick William, 789 Howard 06504
1942 Hersey, Thomas Francis, 291 Whitney Ave. 06511
1937 Hess, Orvan Walter, 2 Church South 06519
1973 Hicks, Jeanne E., 790 Prospect 06511
1970 Higgins, Don Cheney, 111 Park 06511
1943 Hodgkins, Charles Henry, 85 Trumbull 06511
1964 Hogan, Gilbert Francis, 100 York 06511
1970 Holley, Marshall, 226 Dixwell Ave. 06511
1966 Hook, Robert, 789 Howard Ave. 06504
1960 Houlihan, Robert Kenneth, 2 Church South 06519
1924 Howard, Albert Joseph, 432 Whalley Ave. 06511
1955 Hurwitz, Sidney, 2 Church South 06519
1973 Hurzeler, Marc A., 315 Whitney Ave. 06510
1967 Jackson, Stanley Webber, 333 Cedar 06510
1967 Jacobson, Harvey, 1485 Chapel 06511
1938 Jordan, Robert Hough, 111 Park 06511
1949 Joseph, Lester George, 175 Bishop 06511
1944 Kaetz, Harvey Warren, 111 Park 06511
1967 Kashgarian, Michael, 310 Cedar 06510
1973 Kass, Michael Allen, 789 Howard Ave. 06504
1955 Katz, Jay, 65 Trumbull 06510
1951 Kazanjian, Norton Artin, 1423 Chapel 06511
1967 Kenney, James Duncan, 309 Edwards 06511
1943 Kessler, Frederick, 100 York 06511
1972 Khu, Enrico G., 9 Roger Rd. 06515
1964 Kim, Kisik, 136 Sherman Ave. 06511
1962 King, Russell Patrick, 100 York 06511
1951 Kirchner, John Albert, 333 Cedar 06510
1965 Kitahata, Luke Masahiko, 789 Howard Ave. 06504
1938 Klatskin, Gerald, 333 Cedar 06510
1971 Knowlton, Arthur Howard, Yale-New Haven Hospital 06504
1974 Kohorn, Ernest Ignatius, 333 Cedar 06510
1940 Koufman, William Bernard, 186 Sherman Ave. 06511
1965 Kra, Siegfried J., 2 Church South 06519
1964 Krassner, Leonard Sanders, 2 Church South 06519
1954 Kreis, David John, 2 Church South 06519
1972 Krizek, Thomas Joseph, 333 Cedar 06510
1942 Krosnick, Gerald, 2 Church South 06519
1935 Krosnick, Morris Yale, 119 West Park Ave. 06511
1949 Kummer, Alfred John, 251 Edwards 06511
1937 Kushlan, Samuel Daniel, Yale-New Haven Hospital, P. O. Box 1001 06504
1957 LaCamera, Robert George, 878 Howard Ave. 06519
1948 Lach, Frank Edward, 181 Edwards 06511
1961 Landau, Saul Jack, 111 Park 06511
1961 Lattanzi, William Edward, Hospital of St. Raphael 06511
1954 Laudano, Andrew John, 309 Edwards 06511
1936 Lavietes, Paul Harold, 150 Sargent Dr. 06511
1957 Lavietes, Stanley Robert, 2 Church South 06519
1949 Lavorgna, Michael Henry, 301 Orchard 06511
1915 Lear, Maxwell, 2 Church South 06519
1948 Leavy, Stanley Arnold, 340 Whitney Ave. 06511
1972 Lee, Keat-Jin, 98 York 06511
1964 Lena, Richard Patrick, 878 Howard Ave. 06519
1957 Lerner, Aaron Bunsen, 333 Cedar 06510
1957 Lerner, Marguerite Rush, 333 Cedar 06510
1923 Levin, Hyman Alexander, 291 Whitney Ave. 06511
1969 Levine, Ira Richard 65 Trumbull 06510
1956 Levy, Lewis L., 111 Park 06511
1972 Lewis, Dorothy Otnow, 309 Edwards 06511
1948 Lewis, Herbert Daniel, 111 Park 06511
1961 Lewis, Melvin, 333 Cedar 06510
1952 Lidz, Theodore, 333 Cedar 06510
1951 Lillian, Marvin, 17 Hillhouse Ave. 06520
1961 Lindenmuth, Woodrow Wilson, P. O. Box 1001, Yale-New Haven Hospital 06504
1958 Lion, Daniel Joseph, 1423 Chapel 06511
1955 Loewald, Hans W., 65 Trumbull 06510
1927 Logan, William Joseph, 412 Whalley Ave. 06511
1942 Lowman, Robert Morris, Yale-New Haven Hospital 06504
1972 Lujic, Petar, 1423 Chapel 06511
1957 Lynch, William Francis, 1441 Chapel 06511
1963 Lytton, Bernard, 789 Howard Ave. 06504

1926 MacCready, Paul Beattie, 98 York 06511
1973 Magendantz, Henry Guenther, 17 Hillhouse Ave. 06520
1954 Manheim, Gilbert, 111 Sherman Ave. 06511
1963 Maniatis, William R., 41 Trumbull 06510
1972 Mansourian, Vazrick, 111 Sherman Ave. 06511
1965 Margolis, Robert N., 2 Church South 06519
1963 Mark, Harry Horst, 2 Church South 06519
1946 Marshak, Irving Jacob, 254 College 06510
1974 Marshall, John Frederick, Yale-New Haven Hospital 06504
1928 Marvin, H. M., 423 Whitney Ave. 06511
1967 Mass, Henry, 1552 Chapel 06511
1960 Massie, William Jacko, 288 Dixwell Ave. 06511
1957 Mattie, Louis Ralph, 1471 Chapel 06511
1969 Mattson, Richard Henry, 111 Park 06511
1934 McAlenney, Paul Francis, 2 Church South 06519
1966 McCarthy, Charles P. N., 2 Church South 06519
1972 McCullough, William Boyd, 2 Church South 06519
1949 McDonnell, Robert Ralph, 1441 Chapel 06511
1966 McGuire, Charles William, 186 Sherman Ave. 06511
1972 McKee, John Braxton, Jr., 58 Trumbull 06510
1947 Meigs, J. Wister, 60 College 06510
1955 Mendillo, John Joseph, 45 Trumbull 06510
1949 Michel, Lawrence Irwin, 1539 Chapel 06511
1938 Mignone, Joseph, 1450 Chapel 06511
1942 Millen, Samuel Robert, 545 Dixwell Ave. 06511
1961 Milles, Saul Steven, 100 York 06511
1954 Milstone, J. Haskell, 310 Cedar 06510
1955 Moench, John Christopher, 111 Park 06511
1942 Mogil, Marvin, 1481 Chapel 06511
1961 Molumphy, Paul Edward, 860 Howard Ave. 06519
1970 Mombello, Gary Edward, 100 York 06511
1930 Mongillo, Frank, P.O. Box 415 06502
1972 Montgomery, John Sloan, 850 Howard Ave. 06519
1955 Morgan, Walter Sherman, 111 Park 06511
1943 Mott, Frederick Edward, 38 Trumbull 06510
1970 Musto, David Franklin, 333 Cedar 06510
1944 Mylon, Ernst, 358 Central Ave. 06515

1968 Neumann, Hans H., 1 State 06510
1946 Newman, Harry Rudolph, 2 Church South 06519
1957 Niederman, James Corson, 333 Cedar 06510
1955 Nixon, James Thomas, 178 Sherman Ave. 06511
1960 Nolasco, Dario R., 111 Park 06511

1947 O'Brasky, George Harry, 100 York 06511

1933 O'Brasky, Louis, 1172 Chapel 06511
1950 O'Connell, Edward Bernard, 1427 Chapel 06511
1965 Olson, Lowell Eugene, 860 Howard Ave. 06519
1955 O'Neill, John Joseph, 2 Church South 06519
1965 Ornston, Darius Gray, Jr., 255 Bradley 06510
1968 Ozenberger, James Milton, 333 Cedar 06510
1953 Palluotto, William Vincent, 1488 Chapel 06511
1936 Palmieri, Michael Walter, 690 Howard Ave. 06519
1949 Pantaleo, Carl Vito, 301 Orchard 06511
1951 Parisi, Anthony J., 178 Sherman Ave. 06511
1964 Passarelli, Nicholas Mario, 2 Church South 06519
1946 Pasternak, Maxwell, 2 Church South 06519
1972 Paust, Joan Carol, 789 Howard Ave. 06504
1943 Pelliccia, Orlando, Jr., 27 Elm 06510
1956 Perlswig, Ellis A., 30 Bryden Ter. 06511
1961 Peters, Robert Horace, 123 York 06511
1974 Petrelli, Eligio A., 842 Howard Ave. 06519
1927 Petrelli, Joseph, 455 Orange 06511
1946 Petrillo, Charles, 2 Church South 06519
1953 Phillips, Carlton Charles, 2 Church South 06519
1935 Piazza, George Joseph, 690 Howard Ave. 06519
1942 Piccolo, Pasquale A., 114 Sherman Ave. 06511
1965 Pickett, Lawrence Kimball, 333 Cedar 06510
1955 Pilot, Martin Lewis, 333 Cedar 06510
1966 Pinkes, Alexander Herman, 183 Bishop 06511
1931 Pinn, Abraham Samuel, 75 Sherman Ave. 06511
1942 Pitegoff, Charles Haskell, 1395 Chapel 06511
1965 Polayes, Irving Marvin, 100 York 06511
1938 Poverman, David, 67 Trumbull 06510
1968 Prosnitz, Leonard Richard, 333 Cedar 06510
1970 Pruett, Kenneth Albert, 333 Cedar 06510

1974 Raccuglia, Giovanni, 109 Sherman Ave 06511
1973 Ragaza, Edgardo Pamintuan, 670 George 06511
1971 Rapkin, Robert Michael, 106 Park 06519
1943 Redlich, Frederick Carl, 333 Cedar 06510
1974 Reiser, Morton Francis, 333 Cedar 06510
1952 Rhoades, Earl James, 111 Park 06511
1924 Riccitelli, Mariano Louis, 476 Howard Ave. 06519
1946 Richards, William Raymond, 160 St. Ronan 06511
1965 Rifkin, Boris Gershuny, 1488 Chapel 06511
1965 Rightmyer, Eugene Robert, 114 Sherman Ave. 06511
1973 Rigney, Brian Francis, 1450 Chapel 06511
1938 Rilance, Arnold Boon, 2 Church South 06519
1957 Riley, James Albert, 2 Church South 06519
1972 Riordan, Charles E., 1401 Chapel 06511
1951 Robinson, Franklin, 2 Church South 06519
1973 Robson, Martin C., 333 Cedar 06510
1920 Rogers, Orville Forrest, 140 Ogden 06511
1964 Rosnagle, Robert Shields, 98 York 06511
1973 Ross, Stephen Addison, 150 Sargent Dr. 06511
1961 Rossi, Joseph Gerald, 656 Prospect 06511
1941 Roth, Oscar, 666 George 06511
1964 Roth, Stanley, 1423 Chapel 06511
1949 Roth, Stefanie Z., 666 George 06511
1941 Rozen, Alan Abraham, 113 Howe 06511

1967 Saccio, Joseph Dominick, 309 Edwards 06511
1958 Sacks, Herbert Simeon, 110 Laurel Rd. 06515
1933 Salinger, Robert, 309 Edwards 06511
1974 Sasaki, Clarence Takashi, 333 Cedar 06510
1965 Savin, Ronald Clifford, 123 York 06511
1970 Schapira, Henri Jacques, 2 Church South 06519
1954 Scherr, Edward Howard, 111 Park 06511
1967 Schioppo, Dominic Blace, 1485 Chapel 06511
1931 Scholl, Robert Frederick, 215 Whitney Ave. 06511
1972 Schowalter, John Erwin, 333 Cedar 06510
1974 Schreiber, Sanford Jay, 251 Edwards 06511
1963 Schrier, Robert I., 789 Howard Ave. 06504
1967 Schwartz, A. Herbert, 175 St. Ronan 06511
1965 Schwartz, Marc David, 26 Trumbull 06511
1969 Schwartz, Solomon S., 1781 Boulevard 06511
1959 Seligson, David, 789 Howard Ave. 06504
1961 Selzer, Richard Alan, 2 Church South 06519
1951 Senn, Milton J. E., 333 Cedar 06510
1949 Shapiro, Robert, 1450 Chapel 06511
1923 Shea, Michael Stephen, 500 Howard Ave. 06519
1929 Shure, Abraham Lewis, 195 Park 06511
1950 Shutkin, Ned Manfred, 2 Church South 06519
1963 Siegel, Bernard Shepard, 2 Church South 06519
1966 Siggins, Lorraine Deirdre, Yale Health Service 06520
1960 Silberstein, Morton Henry, 646 George 06511
1971 Silva, Hernan Rodrigo, 1435 Chapel 06511
1971 Silver, George A., 60 College 06510
1923 Silverberg, Samuel Joshua, 123 York 06511
1973 Silverman, Joel Peter,789 Howard Ave. 06504
1956 Sirot, Gustave, 2 Church South 06519
1955 Skreczko, Charles Kazimir, 67 Trumbull 06510
1942 Smith, Frederick Francis, One Dixwell Plaza 06511
1959 Smith, Howard Willis, 98 York 06511
1963 Snow, Bernard, 65 Trumbull 06510
1927 Snurkowski, Charles Vincent, 487 Orange 06511
1969 Solitare, Gilbert Bernard, 1450 Chapel 06511
1973 Son, Yung H., 789 Howard Ave. 06504
1958 Southwick, Wayne Orin, 333 Cedar 06510
1939 Spinner, Samuel, 114 Sherman Ave. 06511
1955 Spiro, Howard M., 333 Cedar 06510
1972 Stein, Stephen Alan, 2 Church South 06519
1960 Stern, Harold, 2 Church South 06519
1965 Stern, Stanley, 255 Bradley 06510
1946 Stilson, Carter, 309 Edwards 06511
1973 Stroup, Ralph Francis, 878 Howard Ave. 06519
1955 Stuermer, Virginia Mae, 2 Church South 06519
1954 Sumner, Martin Leonard, 111 Park 06511
1951 Swan, Bernard Robert, 226 McKinley Ave. 06515
1946 Swift, William Everett, 111 Park 06511
1946 Swirsky, Morgan Yale, 1484 Chapel 06511

1946 Taffel, Max, 874 Howard Ave. 06519
1963 Tofig, Rafi, 175 Grand Ave. 06513
1964 Toole, Allan Lawrence, 2 Church South 06519
1947 Tortora, Frank, 620 George 06511
1963 Turkalo, Jaroslav Konstantin, 100 York 06511

1969 Van Der Heide, Charles Joep, 333 Cedar 06510
1971 Van Gilder, John Corley, 333 Cedar 06510
1942 Vegliante, Michael E., 174 Bradley 06511
1941 Vollero, Andrew, 500 Howard Ave. 06519
1964 von Graevenitz, Alexander Wilhelm C., 789 Howard Ave. 06504

1926 Wakeman, Edward Taylor, 240 Bradley 06510
1973 Wartel, Lawrence Jay, 186 Sherman Ave. 06511
1951 Waters, Levin Lyttleton, 310 Cedar 06510
1972 Watstein, George Joseph, 2 Church South 06519
1963 Weil, Ulrich Hans, 123 York 06511
1950 Weiner, Joseph, 256 Edwards 06511
1968 Weisinger, Philip I., 100 York 06511
1948 Wessel, Morris Arthur, 878 Howard Ave. 06519
1958 West, William Loren, 362 Whitney Ave. 06511
1952 Wexler, Henry, 340 Whitney Ave. 06511
1953 Whitcomb, Wayne Phillip, 1450 Chapel 06511
1970 White, Augustus Aaron, 333 Cedar 06510
1947 White, Robert Morris, 111 Park 06511
1936 Wies, Frederick Albert, 690 Howard Ave. 06519
1968 Wight, Leland Walter, Jr., 2 Church South 06519
1956 Wilson, George Leman, 670 George 06511
1931 Wilson, William Rives, 255 Bradley 06510

1947 Winer, Paul, 2 Church South 06519
1969 Wolff, Emanuel Claud, 251 Edwards 06511
1954 Wong, Andrew S., 2 Church South 06519
1962 Wugmeister, Michel, 789 Howard Ave. 06504
1949 Wyatt, Herbert, 135 Whitney Ave. 06510
1965 Yanagisawa, Eiji, 98 York 06511
1958 Yudkin, Gerald Simeon, 257 Church 06510
1947 Zagraniski, Raymond Joseph, 1497 Chapel 06511
1971 Zamore, Leonard H., 186 Sherman 06511
1952 Zanes, Robert P., Jr., 1395 Chapel 06511
1968 Zanker, Theodore, 315 Whitney Ave. 06511
1974 Zegans, Leonard Saul, 34 Park 06508
1971 Zonana, Howard Victor, 123 York 06511
1957 Zuckerman, Bernard D., 2 Church South 06519

NORTH BRANFORD 06471

1972 Cheung, Ernest Hang Fai, Foxon Rd., Rt. 80

NORTH HAVEN 06473

1956 Bornstein, Harold David, Jr., 30 Washington Ave.
1941 Cashman, Justin Laurence, 11 St. John
1965 Errico, Austin Virchow, 256 Quinnipiac Ave.
1961 Fanning, James Bernard, 2 George
1972 Feldman, Daniel Edward, 59 Marion Dr.
1924 Jack, John Louis, 1415 Ridge Rd.
1964 Mulhern, Patrick Henry, 94 Washington Ave.
1940 Parrella, Louis Arnold, 25 Trumbull Pl.
1974 Sokhos, Dimitri Roy, 100 Broadway
1923 Taylor, Sterling Price, 1 St. John

ORANGE 06477

1925 Allen, Edward Pratt, 505 Ridge View Rd.
1965 Catanuto, Nicholas Thomas, 380 Boston Post Rd
1967 Cohen, Gordon Seth. 328 Ann Rose Dr.
1969 Dressler, David M., 839 Hillcrest Rd.
1973 Ephraim, Paul D., 291 Lambert Rd.
1968 Godley, John Allan, 291 Lambert Rd.
1966 Graham, Andrew Jesse, 380 Boston Post Rd.
1970 Kaminsky, David M., 445 Old Cellar Rd.
1952 Karlovsky, Emil Daniel, 291 Lambert Rd.
1971 Kondo, Koretada, 829 Beechwood Rd.
1969 Lanzi, Robert Anthony, 291 Lambert Rd.
1966 Marieb, Norman Joseph, 266 Hemlock Dr.
1956 Morrison, John Blaisdell, 291 Lambert Rd.
1966 Piotrowska-Nyerick, Krystyna Isabella, 513 Howellton Rd.
1972 Sreeniras, Venkatachata I., 235 Midland
1967 Vogel, Robert Mannes, 291 Lambert Rd.
1971 Zelson, Joseph H., 291 Lambert Rd.

OXFORD 06483

1938 Chobian, Joseph Aloysius, 670 Roosevelt Dr.

PROSPECT 06712

1974 DeNicola, Michael, Union City Rd.
1928 Santoro, Grace Marie, P. O. Box 7122

SEYMOUR 06483

1970 Boissevain, Andre Robert, 17 Westerman Ave.
1962 Deduk, Nancy Turner, 17 Westerman Ave.
1962 Deduk, Valentine John, 17 Westerman Ave.
1970 Harvey, Edward Regis, Jr., 62 Main
1948 Longo, Vincent Francis, 161 Main
1934 Rogol, Oscar, 30 Garden

SOUTHBURY 06488

1955 Bernanke, Max, 595A Heritage Village
1972 Forbes, J. Dexter, Hinman Lane
1954 Hart, Henry Harper, Oakledge
1927 Jackson, Arthur Hartt, 68A Hill-Place Dr., Heritage Village
1941 Lee, John Ranks, Heritage Village
1971 Mickenberg, Ira D., Main and Poverty Rd.
1959 Raphael, Martha Carola, Main
1970 Taylor, Marc Jules, Main and Poverty Rd.
1935 Yannet, Herman, Southbury Training School

SOUTH MERIDEN 06450

1955 Klein, Bernard, 244 Main

WALLINGFORD 06492

1973 Arnold, Philip Bruno, Gaylord Hospital
1947 Boyd, Robert Booth, 91 South Main
1949 Breck, Richard William, 26 Fair
1966 Cirmo, William Francis, 245 North Main
1966 Combs, Jerome Thomas, 45 Fair
1942 Ferguson, James Fulton, Jr., 91 South Main
1956 Fraknoi, Joseph, 101 South Main
1967 Gates, William Leonard, 144 South Main
1972 Guzman, Pablo Soriano, Gaylord Hospital
1952 Hines, Thomas Franklin, Gaylord Hospital
1964 Kramer, Bernard, 604 Center
1974 Krc, Eugen, 153 South Main
1968 Lytle, Edwin L., 168 South Main
1974 Manchepalli, Anandarama Setty A., Box 400, Gaylord Farm Rd.
1956 McCleary, Ezekiel Stuart, 340 Harrison Rd.
1947 McGaughey, James David, III, 44 Morningside Ter.
1972 Norton, William S., The Choate School
1960 Piccirillo, Anthony Vincent, 45 Fair
1956 Plakins, Harold Gregory, 245 North Main
1960 Rathey, Ulrich Klaus, Masonic Home and Hospital
1953 St. James, Alfred Thomas, 181 North Main
1956 Sawicki, Lucian Alex, 153 South Main
1961 Smith, Delbert Beidler, 45 Fair
1931 Spignesi, John Theodore, 393 Center
1974 Strazek, Leslaw M., 1 Signal Hill Rd.

WATERBURY

1961 Abrahamian, H. Arto, 1389 West Main 06708
1971 Amatruda, Thomas T., Jr., Waterbury Hospital 06720
1962 Anderson, Duane Roland, 714 Chase Pkwy. 06708
1973 Anthony, Joseph Robert, 56 Franklin 06702
1954 Audet, Charles Henry, Jr., 3 Second Ave. 06710
1954 Audet, Robert Joseph, 3 Second Ave. 06710
1942 Backhus, Louis Charles, 58 Central Ave. 06702
1953 Beeble, John, 578 Watertown Ave. 06708
1960 Bisson, Bertrand Philip, St. Mary's Hospital 06702
1931 Bizzozero, Orpheus Joseph, 134 Grandview Ave. 06708
1968 Bizzozero, O. Joseph, Jr., 134 Grandview Ave. 06708
1970 Blain, Claude Andre, 714 Chase Pkwy. 06708
1950 Blank, Samuel, 951 Chase Pkwy. 06708
1972 Bobowick, Alphonse Roger, 1389 West Main 06708
1970 Bonaccorsi, Benito Italo, 635 Highland Ave. 06708
1943 Bonner, Robert Alexander, Jr., 1389 West Main 06708
1972 Brackett, John William, Jr., St. Mary's Hospital 06702
1964 Buckley, Michael Bernard, 1100 Baldwin 06706
1940 Burke, Joseph Francis, 1389 West Main 06708
1937 Burnham, Bernard Alfred, 1389 West Main 06708
1958 Cappelletti A. Joseph, 134 Grandview Ave. 06708
1945 Carpentieri, Anthony Louis, 195 Columbia Blvd. 06710
1970 Chavez, Aldo Edmundo, 1389 West Main 06708
1962 Cohen, William, 475 Chase Parkway 06708

1942 Coppeto, C. James, 220 East Main 06702
1942 Coshak, Morris, 58 Holmes Ave. 06710
1928 Cottiero, Thomas, 21 Cooke 06702
1947 Cox, Marcus Edward, St. Mary's Hospital 06702
1969 Crupi, Claudio, 911 Country Club Rd. 06708
1964 Cutler, Henry Julius, 9 Cooke 06702
1969 Daly, Joseph Edmund, 1389 West Main 06708
1961 D'Angelo, Daniel A., 636 Plank Rd. 06705
1972 Daniels, Darrell S., 163 Grove 06710
1951 Davie, Robert N., 1211 West Main 06708
1972 de Escobar, Decio Macedo, 29 Central Ave. 06702
1969 DeMarchena, Julio Ernesto, 67 Central Ave. 06702
1956 Dennen, Philip Cushing, 186 Hillside Ave. 06710
1963 De Petrillo, Bart, 1389 West Main 06708
1970 Diggs, Andrew Monroe, 106 Grove 06715
1948 DiLorenzo, Salvatore F., 65 Pine 06710
1953 Dingman, Peter Van Cleef, 1211 West Main 06708
1964 Dudzic, Anthony Luke, 1389 West Main 06708
1972 Dyer, Richard H., Jr., 1211 West Main 06708
1970 Eisen, Steven L., 1211 West Main 06708
1964 Eslami, Mehdi Saghatol, 1389 West Main 06708
1967 Favata, John, 1389 West Main 06708
1972 Ferraro, Robert William, 636 Plank Rd. East 06705
1937 Finkelstein, William, 195 Grove 06710
1926 Finn, Alfred Joseph, 534 Willow 06710
1964 Fisher, William H., Jr., 1211 West Main 06708
1973 Flint, James Foreman, 578 Watertown Ave. 06708
1927 Foster, John Hess, 170 Hillside Ave. 06710
1952 Francis, Henry Lloyd, 53 Central Ave. 06702
1959 Gaines, Gail Allyn, 72 Hale 06708
1951 Gedeon, Philip Elias, 301 Highland Ave. 06708
1963 Gilbert, Roger Key, Waterbury Hospital 06720
1951 Good, Philip Snowden, 714 Chase Pkwy. 06708
1949 Good, Robert Childers, 714 Chase Pkwy. 06708
1947 Gualtieri, Michael Vincent, 27 Cooke 06702
1942 Harty, John E., 1389 West Main 06708
1967 Helvie, Henry Eaton, Waterbury Hospital 06720
1930 Herrmann, Albert Edward, 87 North Main 06702
1931 Hetzel, Joseph Linn, 51 Central Ave. 06702
1967 Hogan, J. Michael, 72 Lakeside Boulevard West 06716
1953 Huber, Herman Crane, Jr., 29 Cliff 06710
1942 Jennes, Milton Leo, 1389 West Main 06708
1964 Kaess, Kenneth Richard, 58 Central Ave. 06702
1956 Karsh, Jamil A., 1389 West Main 06708
1966 Keggi, Kristaps Juris, 1211 West Main 06708
1944 Koleshko, Lawrence Jacob, 1022 Bunker Hill Ave. 06708
1971 Kostecki, Richard Joseph, 1211 West Main 06708
1974 Kraus, Paul Aaron, 1211 West Main 06708
1940 LaBrecque, Frederick Charles, 151 Grove 06710
1954 Larkin, Charles Lewis, Jr., 1039 Chase Pkwy. 06708
1945 Lenkowski, William John, 207 South Elm 06702
1974 Lesser, Robert L., 1039 Chase Parkway 06708
1941 Lewicki, Edward Stanley, 858 North Main 06702
1971 Loyer, Richard Edward, 1211 West Main 06708
1954 Luria, Sidney Bennett, 12 First Ave. 06710
1972 Manes, Peter Rolf, 1039 Chase Pkwy. 06708
1939 Margolius, Norman Calvin, 1 Eastfield Rd. 06708
1948 Marino, Rocco Serefin, 77 Briarcliff Ave. 06708
1971 Marjani, Massoud A., 12 First Ave. 06710
1968 Mascoli, Nicholas Michael, Jr., 1389 West Main 06708
1969 Matyszewski, Stanley Eugene, 64 Robbins 06708
1941 Mayo, Elliott Russell, 129 Prospect 06702
1943 Meo, Richard Carl, 18 Cliff 06710
1941 Merriman, Henry, 115 Prospect 06702
1973 Mirrer, Eugene, 714 Chase Pkwy. 06708
1947 Monagan, Thomas M., 1389 West Main 06708
1956 Moore, Edwin Jude Thaddeus, 89 Roseland Ave. 06710
1947 Mulligan, Thomas Michael, 30 West Main 06702
1960 Nanni, Fernando Peter, 150 Prospect 06702
1969 Nejame, Franklin Francis, 173 Willow 06710
1966 Nezhad, F. Manouchehr, 1389 West Main 06708
1959 Nunes, Manuel, 10 Second Ave. 06710
1952 O'Brien, Francis Hefler, 1211 West Main 06708
1948 Olore, Louis, 47 Prospect 06702
1969 Ostrov, Melvyn R., 475 Chase Pkwy. 06708
1942 Pasetto, Edo, 1183 Hamilton Ave. 06706
1970 Piscatelli, Robert Louis, St. Mary's Hospital 06702
1974 Querijero, Gerardo Barcenas, 714 Chase Parkway 06708
1968 Quigley, William Frederick, 195 Grove 06702
1964 Reed, David Pardee, 1389 West Main 06708
1941 Reichenbach, Alfred Edelbert, 186 Hillside Ave. 06710
1939 Reynolds, Joseph Alban, 54 Central Ave. 06702
1971 Robitaille, George A., 56 Franklin 06702
1947 Root, James Harold, Jr., 1389 West Main 06708
1958 Rosenbaum, Haskell M., 1389 West Main 06708
1925 Ruby, Max H., 170 Hillside Ave., 06710
1939 Ruby, Robert J., 170 Hillside Ave., 06710
1963 Russo, Carmelo George, St. Mary's Hospital 06702
1952 Ryan, Sylvester James, 135 West Main 06702
1970 Sangree, Milton Huyett, Jr., Waterbury Hospital 06720
1954 Santopietro, Olindo Oreste, 714 Chase Pkwy. 06708
1939 Sayers, Daniel O'Connell, 135 West Main 06702
1964 Segall, Edward Marvin, 195 Grove 06710
1971 Sharian, Kent Edward, 1389 West Main 06708
1933 Shea, Vincent Timothy, 20 East Main 06702
1972 Shea, Vincent Timothy, Jr., 20 East Main 06702
1960 Shealy, A. Craig, 1039 Chase Parkway 06708
1948 Shearer, John Kennedy, 1211 West Main 06708
1972 Sherman, Joel Avery, 56 Franklin 06702
1958 Sirica, Alphonse Eugene, 185 Columbia Blvd. 06710
1965 Sirop, Paul Arthur, 195 Grove 06710
1941 Sklaver, Joseph, 95 North Main 06702
1946 Smith, Jasper Archer, 77 Central Ave. 06702
1955 Standard, John Edward, 1211 West Main 06708
1954 Stocking, Anson Gilbert, 30 West Main 06702
1952 Sturman, Robert Harris, 1211 West Main 06708
1970 Suesserman, Herbert I., Waterbury Hospital 06720
1946 Sullivan, Arthur Francis, 493 Willow 06710
1973 Sullivan, Raymond Eugene, 1211 West Main 06708
1964 Summa, John Francis, 159 Grove 06710
1947 Teiger, Paul, 1389 West Main 06708
1971 Thornton, George Fred, Waterbury Hospital 06720
1972 Toffler, Robert B., Waterbury Hospital 06720
1960 Tormo, Vicente, 1389 West Main 06708
1966 Traurig, Allen Robert, 1211 West Main 06708
1971 Tremaglio, Vincent F., 561 Highland Ave. 06708
1960 Valentine, George William, Waterbury Hospital 06720
1916 Vastola, Anthony Paul, 120 Cables Ave. 06710
1958 Veiga, Adriano Seabra, 1389 West Main 06708
1970 Vincitorio, Joseph Alexander, 163 Grove 06710
1959 Warren, Philip, 1389 West Main 06708
1954 Weisberg, Herbert Edward, 63 Central Ave. 06702
1946 Whalley, Evan Joseph, 720 Baldwin 06706
1966 Wihbey, Joseph George, 134 Grandview Ave 06708
1956 Wohlgemuth, Paul Robert, 1211 West Main 06708
1949 Yavetz, Louis Milton, 53 Cooke 06702
1968 Zucker, Leon, 34 Prospect 06702

WEST HAVEN 06516

1973 Balazs, Dezso A., Veterans Administration Hospital
1958 Brodoff, Murray, 385 Main
1938 Chasnoff, John Arthur, 328 Main
1943 Cozzolino, Eugene Norris, 640 Savin Ave.
1958 Day, Edward John, 609 Savin Ave.
1954 deSuto-Nagy, Gyula I., Veterans Administration Hospital
1951 Dzubaty, Michael, 522 Ocean Ave.
1974 Errera, Paul Louis, Veteran's Administration Hospital
1930 Harris, Benedict Richard, ℅ Sound View Specialized Care Center
1971 Hourihane, Mortimer John, 385 Main
1960 Hurowitz, Robert Boyd, 285 Main
1966 Job, Gil Guion, 32 Priscilla Rd. 06515
1959 Keohane, Mary Frances, Veterans Administration Hospital
1972 Kerstein, Morris Daniel, Veterans Administration Hospital
1967 Kinstlinger, Robert, 385 Main
1965 Loh, Hsing Cheng, Veterans Administration Hospital
1930 Milano, Nicolas Antonio, 271 Elm
1947 Milici, John Joseph, 354 Campbell Ave.
1962 Rocco, Anthony Rudolf, 415 Main
1955 Tierney, Lawrence Matthew, 246 Elm
1947 Yesner, Raymond, Veterans Administration Hospital

WOLCOTT 06716

1940 Damiani, Rudolph Andrea, Rose Hill
1928 Morrill, Harold Frost, 133 Wolcott Rd.
1957 Rofrano, Douglas Anthony, 30 Beach Rd.
1973 Walshe, Thomes Eric, 509 Wolcott Rd.

WOODBRIDGE 06525

1961 Adams, Robert Shepard, Center Rd.
1961 Bradley, Raymond Edgar, Jr., 20 Center View Rd.
1948 Brockway, Dorothy W., Old Mill Rd.
1967 Clark, Henry Toole, Jr., 36 Indian Trail
1969 Erba, S. Michael, 1061 Johnson Rd.
1951 Fuhrmann, Josephine Marie, North Pease Rd.
1967 Goffinet, Sara Beatty, 17 Deepwood Rd.
1966 Jung, Ross, 10 Shady Lane
1972 Karadi, Basawraj, Sangamnath, 270 Amity Rd.
1949 Keller, Florence, 264 Amity Rd.
1973 Kulkarni, Vasudev, Venkatrao, 270 Amity Rd.
1952 Lidz, Ruth Wilmanns, Orchard Rd.
1925 Maurer, Lloyd Leslie, Fairgrounds Rd.
1935 Newman, Richard, Old Racebrook Rd.
1954 Treder, Frederick Henry, Center Rd.

WOODMONT 06465

1912 Goldman, George, 195 Kings Highway
1969 Weitzman, Hervey A., 78 Hawley Ave.

YALESVILLE 06494

1954 Dickinson, William Wells, 63 Hill Ave.

OUT OF COUNTY

1957 Anderson, Harold Clifford, Syntex Corp., 3401 Hillview Ave., Palo Alto, California 94304
1961 Atoynatan, H. Tanash, 317 North Main, Manchester 06043
1923 Audet, Charles Henry, Sr., 2528 S. E. 21st, Fort Lauderdale, Florida 33316
1961 Bensch, Klaus G., Stanford Un. School Med., Stanford, California 94305
1961 Benton, Philip Eglin, Box 241, Barley Neck Rd., Orleans, Massachusetts 02653
1939 Bishop, Courtney Craig, Gilfeather Farm, Wardsboro, Vermont 05355
1927 Blodinger, Israel Edward, 2121 N. Ocean Blvd., Boca Raton, Florida 33432
1952 Bondy, Philip Kramer, The Royal Marsden Hosp., London SW3, England
1956 Bradley, William Richards, One American Row, Hartford 06115
1961 Brigham, John Charles, 17 Johnson Ave., Hudson, Massachusetts 01749
1934 Canfield, Norton Apdo Postal 1784, Cuernavaca, Morelos, Mexico
1958 Cary, James Martin, 181 East Cedar, Newington 06111
1946 Clarke, Winthrop Irving, 141 Sea Isle Circle, South Daytona, Florida 32019
1935 Collins, Joseph Osborn, 326 Woodbury Rd., Watertown 06795
1953 Comodo, Nicholas Marius, 1320 Berlin Tpke., Apt. 320, Wethersfield 06109
1937 Craighill, Margaret D., c/o Mrs. A. S. Wotherspoon, East Shore Rd., Jamestown, Rhode Island 02885
1943 Curtis, William Boyd, 108 N. Gordon Rd., Fort Lauderdale, Florida 33301
1956 Czarsty, Joseph Charles, 314 Main, Oakville 06779
1939 Davis, Jachin Boaz, P. O. Box 187, Whitestone, Virginia 22578
1963 Davis, John Marcell, 5490 So. Shore Dr., Chicago, Illinois 60615
1948 Devenis, Michael M., 303 California Ave., Santa Monica, California 90403
1961 Dock, Donald Stone, Atomic Bomb Cas. Comm., U. S. Marine Corps Air Station, F.P.O. Seattle, Washington 98764
1962 Egan, Donald Francis, New Britain Gen. Hosp., New Britain 06050
1960 Fanslow, Allen Woodward, 31 Bridgeview Pl., Stratford 06497
1953 Fierman, Louis B., 25 Marlborough, Portland 06480
1926 Fitzpatrick, Edward Earl, 317 36th Ave., N. E., St. Petersburg, Florida 33704
1966 Gilman, James Irving, 735 Dahlia, Denver, Colorado 80220
1935 Hart, James Clement, 79 Elm, Hartford 06106
1966 Hellman, Samuel, Joint Center for Radiation Therapy, Boston, Mass. 02115
1930 Higgins, Joseph John, 1365 Enfield, Enfield 06082
1965 Hilding, David Anderson, The Newark Eye & Ear Infirmary, Newark, New Jersey 07107
1962 Hoovis, Marvin Lorin, 18 Terrace Dr., Barrington, Rhode Island 02806
1946 Howard, Weaver Oscar, 195 Parkview Ter., Orange, New Jersey 07050
1971 Hurst, Victor Waldemar, Ill, Shag Bark La., Woodbury 06798
1955 Jaeger, Carl Alphonse, 4 Dearfield Dr., Greenwich 06832
1936 Klumpp, Theodore George, 90 Park Ave., New York, N. Y. 10016
1946 Kunkel, Paul, 30 Hospital Ave., Danbury 06810
1971 Langner, Joseph Morton, 201 Main, Southington 06489
1943 Lencz, Erwin D., 1500 Bay Rd., Miami Beach, Florida 33139
1955 Licht, Sidney, 4601 Univ. Dr., Coral Gables, Florida 33146

1972 Litman, Robert B., P.O. Box 917, Bryn Mawr, Pennsylvania 19010
1970 Lydon, Lawrence Gregory Michael, Veteran's Hospital, Rocky Hill 06067
1968 MacLeod, Gordon Kenneth, 9308 W. Parkhill Dr., Bethesda, Maryland 20014
1963 Marsh, Catherine Ohlandt, 181 Westmont, West Hartford 06117
1962 Marsh, Spinks Hamilton, 85 Jefferson, Hartford 06106
1934 Mekrut, Joseph Anthony, 1506 Danbury Dr., Sun City Center, Florida 33570
1958 Mooney, James Patrick, Philips Medical Systems, Inc,. Shelton 06484
1960 Morrissey, Vincent J., Veterans Hosp., Rocky Hill 06067
1958 Opsahl, Jeanette C., Sheraton Plaza, Boston, Mass. 02116
1921 Otis, Fessendon Newport, 21 Guernsey Rd., Bloomfield 06002
1971 Palm, Carlton Robert, 30 Peck Rd., Torrington 06790
1968 Pascale, Jane Fay, 108 Chasewood Lane, East Amherst, New York 14051
1973 Pascual, Rafael S., 391 Ocean Ave., New London 06320
1940 Pelz, Kurt S., 16 Sol's Point Rd., Clinton 06413
1973 Riemer, Hans Otto, Laurel Heights Hospital, Shelton 06484
1960 Rinaudo, Peter A., 59 Skyview Dr., Berlin 06037
1949 Riordan, William Darling, 40 Braeburn Rd., West Hartford 06117
1966 Roach, Donald Patrick, 449 Howe Ave., Shelton 06484
1931 Sandulli, Gaetano Renato, 212 Middlebury Rd., Watertown 06795
1972 Scheig, Robert Lee, V. A. Hospital, Newington 06111
1951 Spencer, Leon O., 410 42nd Ave. North, Myrtle Beach, South Carolina 09577
1971 Spicuzza, Thomas Joseph, P. O. Box 531, Woodbury 06798
1924 Stettbacher, Henry John, 906 Locust, Cambridge, Maryland 21613
1923 Sullivan, Thomas Joseph, 2500 S. Ocean Blvd., Boca Raton, Florida 33432
1954 Vileisis, Vita, Ben Sherman Hill, Woodbury 06798
1933 Zimmerman, Harry Martin, Montefiore Hospital, Bronx, New York 10467

New London County Association

President: David G. Rousseau, 4 North Second Ave., Taftville 06380
President-Elect: Hilliard Spitz, 447 Montauk Ave., New London 06320
Vice-President: Clifford E. Wilson, 7 Clinic Dr., Norwich 06360
Secretary-Treasurer: Jerome Bobruff, 425 Montauk Ave., New London 06320
Councilor: Charles M. Krinsky, 27 Broad, New London 06320
Associate Councilor: Frederick C. Barrett, 108 New London Tpke., Norwich 06360

Annual Meeting, First Thursday in April
Semi-Annual Meeting, First Thursday in October

COLCHESTER 06415

1971 Bender, Louis, 21 Norwich Ave.
1956 Conrad, Carl Caspar, 24 Norwich Ave.

GALES FERRY 06335

1971 Engelke, Harold August, Medical Arts Building, R. F. D. No. 12

GRISWOLD

Jewett City 06351

1960 Costa, Pasquale James, Summit Dr.
1956 Gosselin, Albert George, 65 Brown Ave.

GROTON

1955 Brown, Walter McKeand, 295 Long Hill Rd. 06340
1953 Force, Berwyn Rodney, 272 Thames 06343
1970 Hollister, James Malcolm, 167 Broad 06340
1946 MacDougall, A. Duncan, 174 Bridge 06343
1961 Soriano, Ernesto Reyes, 1064 Poquonnock Rd. 06340
1944 Sutton, Paul, 174 Bridge 06340

HADLYME 06439

1933 Wilson, George Campbell, Box 98

EAST LYME 06333

1970 Edgar, Edward, E., Black Oak Dr.

LYME

1927 Ely, Julian Griffin, R. F. D. No. 2 06371

MYSTIC 06355

1967 Barry, Richard M., Sandy Hollow Rd.
1974 Brensilver, Howard L., Sandy Hollow Rd.
1950 Edmonstone, William Mason, 102 Library
1961 Graham, Roger A., 761 River Rd.
1973 Schmidt, James Lee, Box 38
1968 Sproul, Lyman Edwin, Sandy Hollow Rd.

NIANTIC 06357

1972 Glasser, Samuel Thomas, 4 Columbus Ave.
1951 Hall, Mary Nettleton, 88 Smith
1954 Kramm, William Amede, Hope
1972 Young, Daniel David, 22 Pennsylvania Ave.

NEW LONDON 06320

1970 Adams, Gene Roger, 276 Montauk Ave.
1974 Andrews, William Baird, 276 Montauk Ave.
1956 Beatman, Bernard, 34 Channing
1933 Becker, Joseph, 302 State
1957 Bedrick, Morton, 345 Montauk Ave.
1963 Bobruff, Jerome, 425 Montauk Ave.
1933 Brosnan, John Francis, 293 Montauk Ave.
1971 Brown, Henry, 350 Montauk Ave.
1969 Burton, George, 488 Montauk Ave.
1960 Cavicke, David Conrad, 350 Montauk Ave.
1970 Clayton, Edwin Martin, Lawrence & Memorial Hospitals
1961 Cooper, Donald Wesley, 350 Montauk Ave.
1958 Coulson, Louis Anthony, 425 Montauk Ave.
1972 Derby, James Hart, 41 Faire Harbour Pl.
1949 Dey, Frederick Lemuel, 464 Ocean Ave.
1963 Dorantes, Joaquin, Lawrence & Memorial Hospitals
1931 Dyer, Charles Edward, 297 Montauk Ave.
1954 Dyer, Charles Frederick, 327 Montauk Ave.
1948 Ellison, Malcolm Mitchell, 328 Montauk Ave.
1947 Fagan, Frederick J., 19 Glenwood Ave.
1964 Fleisher, Paul Robert, 435 Montauk Ave.
1965 Foss, Beverly Ann, 325 Montauk Ave.

1958 Fulchiero, Egidio, Lawrence & Memorial Hospitals
1966 Gaito, Raymond Arthur, 464 Ocean Ave.
1954 Gerity, Paul Joseph, 465 Montauk Ave.
1971 German, John Nixon, 350 Montauk Ave.
1934 Gipstein, Edward, 181 Broad
1947 Haines, Henry Lippincott, 464 Ocean
1939 Hartman, Frederick Brittinger, 342 Montauk Ave.
1958 Hayes, David, Lawrence & Memorial Hospitals
1922 Hendel, Isidore, 336 Pequot Ave.
1934 Henkle, Robert Theodore, 132 Ocean Ave.
1965 Hostnik, William John, 280 Montauk Ave.
1974 Immordino, Peter Anthony. 154 Broad
1936 Irwin, Harold Hyman, 158 Williams
1970 Jackson, Daniel Leslie, 276 Montauk Ave.
1966 Johnson, Howard King, Jr., 488 Montauk Ave.
1966 Johnson, Mary Ellen, 488 Montauk Ave.
1956 Jones, William Nicholas, 41 Faire Harbour Pl.
1974 Jung, Robert Marc, 41 Faire Harbour Pl.
1961 Kaplan, Donald H., 345 Montauk Ave.
1962 Karno, Martin Louis, 464 Ocean Ave.
1972 Kim, C. Albert. Lawrence & Memorial Hospitals
1972 Klimek, Robert J., 154 Broad
1940 Krinsky, Charles Morris, 27 Broad
1958 Kuhn, Herbert Ray, 425 Montauk Ave.
1962 Leib, Dorothy Baird, 429 Montauk Ave.
1962 Leib, Gilbert Middleton Patten, 447 Montauk Ave.
1953 Lena, Hugh F., Jr., 154 Broad
1947 Loiacono, Richard A., 464 Ocean Ave.
1953 Longo, Vincent Joseph, 437 Montauk Ave.
1936 Lubchansky, Jacob Harris, 27 Broad
1970 Marchand, Gilles Alfred, 425 Montauk Ave.
1957 Mariani, Roland A., 280 Montauk Ave.
1968 Marshall, David Charles, 154 Broad
1964 Marx, Frank George, 425 Montauk Ave.
1949 McFarland, Ward John, 833 Ocean Ave.
1970 Mensch, Arthur H., Lawrence & Memorial Hospitals
1968 Moalli, Daniel Edward, 350 Montauk Ave.
1964 Molloy, Peter Myers, Lawrence & Memorial Hospitals
1966 Morse, Willard Jackson, Jr., 391 Ocean Ave.
1952 Murray, Joseph Thomas, 342 Montauk Ave.
1953 Murray, William John, Jr., 447 Montauk Ave.
1946 Nielsen, Tage M., 425 Montauk Ave.
1951 Olsen, Robert Clarence, 496 Montauk Ave.
1963 Palmer, Walter M., 325 State
1963 Peterson, David M., 342 Montauk Ave.
1955 Prokesch, Clemens Elias, 435 Montauk Ave.
1968 Robinson, Charles H., Jr., 276 Montauk Ave.
1952 Saxe, Louis Phillip, 341 Montauk Ave.
1973 Schmidt, C. William, 350 Montauk Ave.
1960 Scholz, Horst Dieter, Lawrence & Memorial Hospitals
1972 Schwartzberg, Stuart Gerald, 358 Montauk Ave.
1971 Silver, Stephen Euric, 271 Montauk Ave.
1949 Spitz, Hilliard, 447 Montauk Ave.
1971 Sprafke, Donald Francis, 41 Faire Harbour Pl.
1965 Sprecace, George Alcide, 248 Montauk Ave.
1974 Srinivas, Ragna Ragunath. 64 Dell Ave.
1974. Stein, Sigmund Charles, 280 Montauk Ave.
1940 Sulman, Morris, 203 Montauk Ave.
1933 Taylor, Robert Nelson, 159 State
1963 Tighe, John Anthony, 419 Montauk Ave.
1951 van Dyk, Arnulf R., 50 Granite
1947 Verie, Kathryn E., 159 Ocean Ave.
1960 Wade, Philip Barry, 275 Montauk Ave.
1950 Warnshuis, Lilian Cook, 25 Thames
1935 Wies, Carl Hendricks, 115 Huntington
1938 Woodward, Joseph Cutler, 358 Montauk Ave.
1947 Wool, Joseph M., 271 Montauk Ave.
1972 Yoselevsky, Melvin Arnold, 334 Montauk Ave.

NORWICH 06360

1974 Ahamed, Sultan, 63 Lincoln Ave.
1946 Albamonti, Mario John, 6 Clinic Dr.
1950 Allen, Joseph Eugene, 101 West Town
1950 Anderson, Fred Andrew, 7 Clinic Dr.
1950 Anderson, Ruth Messer, 15 Butternut Dr.
1967 Andrews, Ralph Colvin, 16 Franklin
1933 Archambault, Henry Allard, 120 Lafayette
1972 Aromin, Salvador C., Uncas-on-Thames
1959 Balfour, James Douglas, William W. Backus Hospital
1950 Barrett, Frederich Charles, 108 New London Tpke.
1969 Bergendahl, Gilbert Thomas, 120 Lafayette
1935 Bergendahl, Harold Andrew, 120 Lafayette
1973 Betten, Michael Gerald, 12 Case
1942 Bielecki, Casimer Eugene, 120 Lafayette
1972 Bolstad, Ralph Arthur, Norwich State Hospital
1962 Browning, S. Pearce, III, 5 Case
1959 Carter, Frank James, 120 Lafayette
1959 Carter, Marie Kernan, 185 Broadway
1965 Coletti, Larry, 108 New London Tpke.
1964 Cook, Thomas Jackson, 161 Water
1966 Cranston, Robert W., Jr., 43 Ox Hill Rd.
1954 Cressy, Norman Leo, Uncas-on-Thames
1974 de Groot, Theodore J., 53 Lafayette
1942 Drobnes, Sidney, 24 Sachem
1956 Eadie, Frederick Stearns, 120 Lafayette
1969 Edgar, Malcolm S., Jr., 2 Clinic Dr.
1958 Glenney, Christopher Courtney, 2 Clinic Dr.
1966 Greene, Leonard Albert, 120 Lafayette
1962 Griffin, J. Clement, 12 Case
1948 Guss, Louis, 59 Sachem
1935 Higgins, Harold William, 7 Clinic Dr.
1962 Joseph, Julien L., Scotland Rd., R. F. D.
1971 Kadish, Joan Alice, William Backus Hospital
1971 Kadish, Manuel Edgar, Brown School Rd., R. F. D. No. 3
1960 Kalams, Zannis Spiros, 12 Case
1974 Karjoo, Rahim, 326 Washington
1947 Katz, Morris E., 108 New London Tpke.
1954 Kelleher, James H., 100 Fanning Ave.
1946 Kelley, Winfield Orthello, Uncas-onThames
1967 Kerrigan, Robert, 87 Lafayette
1962 Kropp, Peter Johann, 24 Sachem
1966 Langhammer, Hans, Norwich State Hospital
1947 LaPierre, Arnaud Rogers, 5 Clinic Dr.
1949 LaPierre, Warren Winthrop, 5 Clinic Dr.
1974 Lee, Woong B., 57 Lafayette
1950 Lord, Benjamin John, Jr., 120 Lafayette
1936 Mahoney, Joseph John, 120 Lafayette
1954 Manning, Imogene Hopkins, 120 Lafayette
1947 Martin, John Edward, Clinic Dr.
1967 Martin, Morgan Graham, P. O. Box 508
1955 Masterson, Thomas Joseph, 2 Clinic Dr.
1969 McGrath, Thomas Joseph, 108 New London Tpke.
1967 McKeon, William Francis, 148 Sachem
1952 Milone, Joseph E., 16 Franklin
1951 Morrison, John Edward, Norwich Hospital
1935 O'Connell, Patrick Henry, 10 Shetucket
1973 Odim, Usim, Norwich Hospital
1942 Oppenheimer, Kurt, 108 New London Tpke.
1959 O'Toole, Peadar, P. O. Box 508
1968 Parthenis, Alexander, Box 508
1947 Phillips, Nicholas T., 93 Sachem
1973 Powell, Bernardo, Norwich State Hospital
1972 Prioli, Katherine M., 108 New London Tpke.
1934 Quintiliani, Albert, 58 Broadway
1973 Rosenberg, Peter J., 159 Sachem
1948 Santiccioli, Aldo Bruno, Norwich Hospital
1964 Saracino, Luigi, Norwich Hospital

1954 Sawyer, James David, 120 Lafayette
1942 Schwarz, H. Peter, 120 Lafayette
1968 Sculco, Mario, 120 Lafayette
1935 Sears, Lewis, 257 Main
1938 Segel, Solam, 159 Sachem
1968 Solomon, Morton, 120 Lafayette
1966 Songco, Mariano F., Norwich Hospital
1974 Springer, Gerald L., 326 Washington
1929 Suplicki, John William, 257 Main
1921 Sussler, David, 65 Main
1968 Taylor, K. Stephens, 161 Water
1963 Torres, Clemencio Bautista, 12 Case
1963 Tramontozzi, Anthony Daniel, 108 New London Tpke.
1973 Wahba, Hany S., 12 Case
1955 Ward, Franklyn Pennington, 117 Lafayette
1932 Wener, William Victor, 287 Harland Rd.
1965 Wierzbinski, Joseph Paul, 36 Sachem Plains Rd.
1953 Wilson, Clifford Edward, 7 Clinic Dr.

NORWICHTOWN 06360

1954 Harkins, James Anthony, 98 Case

OLD LYME 06371

1962 Friedmann, Karl R.
1973 Griswold, Matthew, P. O. Box 206
1967 Hackbarth, Clifford James, Boston Post Rd.

QUAKER HILL 06375

1970 Rablen, Elizabeth Charlotte, 40 Old Norwich Rd.
1929 Starr, Richard Mallory, 7 Best View Rd.

SALEM 06415

1974 Bingham, David Brewster, White Birch Rd.

TAFTVILLE 06380

1949 Rousseau, David George, 4 North Second Ave.

UNCASVILLE 06382

1949 Miselis, Frank Joseph, 221 Norwich-New London Tpke.
1929 Rasmussen, Hans Norman, 92 Depot Rd.

WATERFORD 06385

1962 Behringer, Frederick Rudolph, 14 Susan Ter.
1946 Coppola, Edward Attilio, 2 Highland Dr.
1965 Ellis, Grace Davis, 214 Niantic River Rd.
1936 Ferguson, Helen Knox, 172 Niantic River Rd.
1969 Knirsch, Anthony K., 28 Shawandasee Rd.
1967 Rabinovitch, Peter I., 175 Boston Post Rd.

OUT OF COUNTY

1972 Baker, John Henry, Bumed (74) Navy Dept., Washington, D.C. 20372
1951 Birchall, Ellen Frances, 466 Watervliet-Shaker Rd., Latham, New York 12110
1971 Borger, Allen Paul, 253 E. Hunting Ridge Rd., Stamford 06903
1962 Corazzelli, Frank George, Jr., 60 Canterbury Lane, Trumbull 06611
1966 Cuello, Rafael A., Bridgeport Hospital, Bridgeport 06610
1971 DiBella, Richard Joseph, Thompson Medical Center, North Grosvenordale 06255
1918 Douglass, Edmund L., c/o Mr. Edmund J. Douglass, 17 Water, Hingham, Massachusetts 02043
1941 Fowler, Roger N., 205 Heather La., Ramsey, New Jersey 07446
1968 Gilgore, Sheldon G., 9 Rockwell Lane, Darien 06820
1935 Hale, Virginia Anne, 6701 Ave. A, Apt. 1 Sarasota Florida 33581
1968 Harrison, Milton, 145 Pago Pago Dr., Naples, Florida 33940
1972 Jones, E. Arnold, Wildwood Medical Specialists, Essex 06426
1963 Lavergne, Bernard Maurice, 65 Main, Old Saybrook 06475
1956 Liotta, Salvatore, 39 North Main, Essex 06420
1928 Mills, Bernard, Litchfield, Hawthornden State Hospital, Northfield, Ohio 44067
1937 Moore, Maurice R., P.O. Box 3046, Spring Hill, Florida 33512
1958 Moore, Richard John, Box 111, Independence, Iowa 50644
1934 Morse, Willard Jackson, 452 Lighthouse Way, Box 306, Sanibel, Florida 33957
1961 Nelligan, David Joseph, Magna La., Westbrook 06498
1962 Olejnik, Waclaw, Undercliff M. H. Center, Meriden 06450
1968 Tan, Djin Liang, Undercliff Mental Health Center, Meriden 06450

Tolland County Association

President: Edward A. Palomba, Main, Somers 06071
Vice-President: Michael R. Sharon, 57 Union, Rockville 06066
Secretary-Treasurer: Marjorie A. Purnell, 23 Davis Ave., Rockville 06066
Councilor: Allyn B. Dambeck, R. F. D. No. 4, Rockville 06066
Associate Councilor: David S. Hastings, 15 Woodland Dr., Stafford Springs 06076
Annual Meeting, Third Tuesday in March
Semi-Annual Meeting, Third Tuesday in October

ROCKVILLE 06066

1971 Abbott, Howard, 57 Union
1968 Adamo, Benjamin, 57 Union
1964 Atkins, Michael Patrick, 57 Union
1971 Brooks, Neil Hurst, 1 Ellington Ave.
1933 Burke, Francis Henry, P. O. Box 88
1958 Dambeck, Allyn Benard, R.F.D. #4
1967 Erickson, George Carl, Lakeview Heights
1971 Haber, Melvin, Rockville General Hospital
1955 Josephson, Neil David, Rockville General Hospital
1955 Kristan, Joseph John, 57 Union
1970 Kriz, John Joseph, Rockville General Hospital
1950 Kummer, Seymour Isaac, 1 Ellington Ave.
1969 Marmer, Ellen Lucille, 57 Union
1952 Purnell, Marjorie Axford, 23 Davis Ave.
1954 Purnell, Oliver James, 57 Union
1931 Schneider, William, 72 Orchard
1972 Schwartz, Gerald Lee, 57 Union
1969 Shapiro, Harold O., 57 Union
1966 Sharon, Michael Reinhardt, 57 Union

SOMERS 06071

1941 Cullen, James Rescott, Hall Hill Rd.
1965 Maier, Robert Fritz, Main
1960 Palomba, Edward Anthony, Main
1974 Whelan, John Joseph, 39 Hampden Rd.

STAFFORD SPRINGS 06076

1960 Amanti, Joseph Anthony, 89 East Main
1974 Chirot, Michel, Johnson Memorial Hospital
1964 DeTora, Albert M., 53 East Main
1973 DiMeola, Herbert Joseph, 37 East
1957 Hastings, David Spencer, 15 Woodland Dr.
1971 O'Brien, Gerald John, Johnson Memorial Hospital
1974 Rodriguez, Josefina C., Star Rt., Box 5, 97 East

VERNON 06086

1969 Hunt, Malcolm L., R. D. 8
1965 Mara, Neil F., 117 Irene Dr.
1970 O'Connell, Charles George, Box 2278

OUT OF COUNTY

1965 Coyne, Edward Anthony, 565 Wolcott Hill Rd. 06109
1973 Greene, Patrick Joseph, 74 Lakewood Circle N., Manchester 06040
1957 Magauran, Brendan Gerard, 199 Maple, Enfield 06082
1955 Sonnen, Victor Gerard, Broad Brook Rd., Hazardville 06036
1949 Thayer, R. Bruce, Jr., 221 Whitney Ave., New Haven 06509
1965 Williams, William Lawson, 477 Conn. Blvd., East Hartford 06108
1960 Yoon, Ill Lyong, 115 Elm, Enfield 06082

Windham County Association

President: Willliam A. Whalen, Jr., 150 Mansfield Ave. Willimantic 06226
Vice-President: Edmund B. Raheb, 14 Carter, Danielson 06239
Secretary-Treasurer: Anne H. Dodd, 86 Puddin La., R.D. #3, Willimantic 06226
Councilor: George E. Roch, 132 Mansfield Ave., Willimantic 06226
Associate Councilor: Rudolph E. Klare, Rt. 169, East Woodstock 06244
Annual Meeting, Third Thursday in March
Semi-Annual Meeting, Third Thursday in October

ABINGTON 06230

1948 Valentine, Bruce, Eliza F. Clark Memorial Center

EAST WOODSTOCK 06244

1965 Klare, Rudolph Emil, Route 169

HAMPTON 06247

1974 Larkin, John Thomas, Sand Hill Rd.
1959 Sornberger, Charles Franklin, R. F. D.

KILLINGLY 06239
DANIELSON

1935 Chartier, Gerard Marcel, 39 Broad
1959 Grinsell, Harvey James, 112 Broad
1968 Harton, Maurice R., 81 Broad
1949 Jones, James Franklyn, 39 Broad
1973 Khoury, Alexis E., 11 Spring
1940 Laakso, Andrew Olavi, 39 Broad
1974 Middleton, Charles J., 14 Carter
1962 Raheb, Edmond B., 14 Carter
1957 Robinson, Lavius Arad, Jr., 9 Hutchins
1949 Weigel, Stanley Joseph, 53½ Broad

MOOSUP 06354

1948 Barry, E. Arthur, Jr., 1 Maple
1946 Woodworth, John Albert, Daggett

NORTH GROSVENORDALE 06255

1970 Dufort, Robert Thomas, Thompson Med. Ctr., R. D. No. 1
1963 Goyette, Romain Philip, R. F. D. No. 1
1963 Park, Sowhey, R. R. No. 1

POMFRET 06258

1953 Eaton, Harry E., P. O. Box 238

PUTNAM 06260

1942 Bates, David Hinrichs, Hotel Putnam
1969 Bouthillier, Joseph E., R.D. 2, Pomfret Rd.
1963 Canty, William Patrick, 110 Church
1934 Chapnick, Morton Herman, 30 Gilman
1970 Diaz, Arturo, Day Kimball Hospital
1947 Dinolt, Robert, 158 Main
1971 Hochberg, David Thomas, 320 Pomfret
1973 Hogan, Austin Francis, 110 Church
1941 Margolick, Moses, 23 Providence
1959 Meyer, John Louis, Day Kimball Hospital
1969 Painter, Robert Lowell, 168 Main
1921 Phillips, Karl Tristram, 8 Pleasant
1930 Prosser, Florence Dean, P. O. Box 642
1934 Shepard, William Mac, 64 Grove

THOMPSON 06277

1952 Waldron, Sherman Lester, R. R. 1, Box 2

WILLIMANTIC 06226

1967 Amdur, Millard Jason, Beech Mountain Rd., R.F.D. No. 3
1949 Anderson, James Thomas, 132 Mansfield Ave.
1935 Arnold, Morton, 29 North
1939 Basden, Edwin Herbert, 828 Main
1950 Beardsley, Frederick Armour, 132 Mansfield Ave.
1966 Becker, George Edward, 150 Mansfield Ave.
1962 Bird, Frank Luther, 132 Mansfield Ave.
1956 Bolt, Ernest Albert, Jr., 132 Mansfield Ave.
1970 Bopp, Raymond Karl, 150 Mansfield Ave.
1972 Browne, Edward Randolph, Windham Community Memorial Hospital
1969 Calise, Peter Joseph, Windham Community Memorial Hospital
1964 Dodd, Anne H., 86 Puddin La., R.D. #3
1961 Dodd, Samuel Garland, Windham Community Memorial Hospital
1966 Doyle, Fred Wendell, Windham Community Memorial Hospital
1972 Ellzey, William Joseph, 132 Mansfield Ave.
1973 Flynn, J. Dennis, 112 Mansfield Ave.
1969 Gibson, Luther White, 132 Mansfield Ave.
1968 Gilleash, Robert S., 36 Watson at Memorial Park
1965 Glasser, Morton, 132 Mansfield Ave.
1968 Glugover, Donald Benjamin, 70 Mansfield Ave.
1947 Grillo, William, 393 Prospect
1973 Griswold, Douglas Marsh, 150 Mansfield Ave.
1958 Herbert, Earle Avery, Windham Community Memorial Hospital
1970 Lawrence, Gerard James, 150 Mansfield Ave.
1940 Little, Mervyn Henry, 132 Mansfield Ave.
1940 Little, Olga A. G., 132 Mansfield Ave.
1948 Major, James W., 150 Mansfield Ave.
1947 Maurer, William Spooner, 132 Mansfield Ave.
1973 Moskowitz, Robert Irwin, 70 Mansfield Ave.

1964 Nepomuceno, Maria Nelly, 132 Mansfield Ave.
1967 Peterson, Carl Gregory, Jr., 150 Mansfield Ave.
1936 Roch, George E., 132 Mansfield Ave.
1956 Rosenberg, Murray Zale, Windham Community Memorial Hospital
1937 Rothblatt, Reuben, 132 Mansfield Ave.
1958 Sandler, Gerald, 132 Mansfield Ave.
1963 Sandler, Melvin James, 132 Mansfield Ave.
1958 Sikand, Sage Datt, 70 Mansfield Ave.
1914 Smith, Fred Morse, 103 Windham Rd.
1929 Spector, Nathan, 59 Church
1935 Vernon, Sidney, 185 Birch
1959 Whalen, William Anthony, Jr., 150 Mansfield Ave.

OUT OF COUNTY

1973 Blaney, Lamson, Box 154, Mansfield Center 06250
1954 Bowen, Robert Phillip, High, Coventry 06238
1946 Dayton, Neil Avon, 434 Bay Aristocrat, 1475 U. S. Hwy. No. 19, South, Clearwater, Florida 33516
1942 Freeman, John Jay, 18 Hillside Circle Storrs 06268
1932 Gilman, Ralph Lawrence, Dog Lane, Storrs 06268
1971 Haney, John F. B., 667 Chaffeeville Rd., Storrs 06268
1971 Kaiser, Julian Stevens, University of Connecticut, Storrs 06268
1953 Kennedy, George Lloyd, 5 Maple, Jewett City 06351
1952 LeRoy, John Baptiste, University of Connecticut, Storrs 06268
1970 Loeser, Lucille Kelley, Farmstead Rd., Storrs 06268
1967 McGowan, Thorburn S., University of Connecticut, Storrs 06268
1973 Oxley, Leo L., Box 36, Storrs 06268
1964 Prescott, Blake Daniels, Storrs Rd., Storrs 06268
1970 Rucker, Lucille Gertrude, R.R. No. 1, Box 172A, Storrs 06268
1953 Tobi, Louise Gertrude, Hardy Rd., Loudon, New Hampshire 03301
1970 Wandersce, Edward Paul, Star Route, Mansfield Depot 06251
1972 Wintrob, Ronald Marvin, Devwin Hall, Box 77, Mansfield Center 06250

Associate Members

1941 Burr, Harold Saxton, Town Woods Rd., Old Lyme
1947 Darling, George Bapst, 11 Burns, New Haven 06511
1942 Hamilton, James A., University of Minnesota, Minneapolis, Minn.
1941 Hiscock, Ira Vaughn, 215 Highland, New Haven
1941 Mickle, Friend Lee, 9 Old Pepperidge Lane, Whethersfield 06109
1953 Richardson, William Alan, 99 East Hunting Ridge Rd., Stamford
1954 Sibley, Hiram, 79 West Monroe, Chicago, Illinois 60603

ALPHABETICAL ROLL OF MEMBERS

With medical school and year of graduation

Aaron, S. D., Virginia '64, Westport
Abad, A. A., Hungarian P. Pazmany '45, Middletown
Abbot, F. K., Virginia '46, Cromwell (Hartford County)
Abbott, H., St. Un. N. Y. '52, Rockville
Abbott, J. L., Albany '62, Torrington
Abrahamian, H. A., Salonica '49, Waterbury
Abrahams, I. W., N. Y. U. '57, Meriden
Abrahams, M., Tufts '31, New Canaan
Abrahamson, R. H., McGill '30, Stamford
Abrams, H., State Univ. New York '57, Bridgeport
Abreu, F. B., Santo Domingo '62, Kent
Acqua, L. C., Yale '41, East Hartford
Adamo, B., Seton Hall '62, Rockville
Adams, A. J., Indiana '38, Torrington
Adams, E. C., Cornell '34, Guilford
Adams, G. R., Jefferson '60, New London
Adams, H. A., Trinity Coll. Dublin '47, Cromwell
Adams, M. Johns Hopkins '29, Port Chester, New York (Fairfield County)
Adams, R. J., Ohio State '60, Middletown
Adams, R. S., Columbia '48, Woodbridge
Adler, D. H., N. Y. U. '43, Westport
Adzima, J. M., Maryland '27, Trumbull
Agarwal, C. K., King George's Med. Coll. '53, Rocky Hill
Agee, F. B., Jr., George Washington '42, Wethersfield
Aguiar, J. C., Brazil '52, Ansonia
Ahamed, S. Un. Madras '66, Norwich
Ahmed, E. H. S., Alexandria '52, Norwalk
Ahrens, L. B., Vermont '51, New Britain
Aiello, L. J., Boston '35, Norwalk
Aitken, G. S., N. Y. U. '48, Torrington
Albamonti, M. J., Tufts '38, Norwich
Albanese, A. N., Siena, Italy '53, Danbury
Albert, D. M., Pennsylvania '62, New Haven
Albert, J. S., N.Y.U. '68, Weston
Albert, M., Tufts '57, Meriden
Albis, F. J., Marquette '46, East Haven
Albis, M. D., Marquette '48, East Haven
Albom, J. J., Columbia '39, New Haven
Albright, J. A., Illinois '54, New Haven
Alden, J. O., Tufts '47, Hartford
Alderman, D. B., Long Island '46, New Haven
Alderman, M. Y., Chicago '49, Hartford
Alena, G. R., N. Y. Med. Coll., '64, Stratford
Alexander, J. M., Seton Hall '63, Bridgeport
Alexander, S. J., Univ. & Bellevue '32, Middletown
Alfonsi, A. A., Albany '50, Southington
Alisberg, N., N. Y. U. '44, Bristol
Allard, G. G., Laval '50, Stamford
Allen, B. I., Washington 32, Norwalk
Allen, E. P., Yale '24, Orange
Allen, J. C., Hahnemann '39, Hartford
Allen, J. E., Syracuse '30, Norwich
Allen, M. M., Woman's Medical '35, West Hartford
Allen, R., Temple '43, West Hartford
Allport, V. G., Queen's Un. '46, Hartford
Alonso, L., Valencia Spain '69, Meriden
Alpert, A. E. Creighton '49, New Haven
Alpert, M., Yale '28, Bridgeport

Altenberg, H. E., N. Y. U. '47, West Hartford
Alter, B. N., George Washington '61, Hartford
Altshul, V. A., Yale '60, New Haven
Amanti, J. A., N. Y. U. '49, Stafford Springs
Amarant, L., Vienna '32, Bridgeport
Amato, J. A., Georgetown '56, Hartford
Amato, P. R., Tufts '61, Hartford
Amatruda, F. G., Yale '23, New Haven
Amatruda, T. T., Jr., Yale '51, Waterbury
Amdur, M. J., Yale '64, Willimantic
Ameen, L., Virginia '46, New Haven
Ames, W. G., Columbia '38, Essex
Amore, F. R., Bologna '57, New Haven
Amos, I. L., McGill '26, Ridgfield
An, B., Yonsei, Un. '63, Hartford
Anastasi, A. F., Rome '65, Hartford
Anderson, A. S., Catholic Univ., Belgium '57, West Hartford
Anderson, C. W., Harvard '34, Greenwich
Anderson, D. R., Tufts '56, Waterbury
Anderson, F. A., Boston '40, Norwich
Anderson, F. P., Yale '62, New Haven
Anderson, G. G., Tennessee '56, New Haven
Anderson, G. W., Jefferson '46, Hartford
Anderson, H. B., Indiana '41, Bridgeport
Anderson, H. C., Minnesota '43, Palo Alto, California (New Haven County)
Anderson, J. T., Pennsylvania '43, Willimantic
Anderson, R. M., Boston '40, Norwich
Anderson, T. E., George Washington Un. '64, Torrington
Andrews, A. E., Beirut '45, Hartford
Andrews, R. C., Boston '50, Norwich
Andrews, W. B., Columbia '67, New London
Andrus, O. B., Univ. & Bellevue '32, Milford
Andrus, W. B., Tufts '61, Portland
Angiolicchio, R., Sydney, Australia '63, Hartford
Annunziata, V., Long Island Coll. Hosp. '30, Newtown
Antell, M. J., Vermont '29 Southport
Anthony, J. R., Tufts '60, Waterbury
Anton, M. C., Marquette '39, Stratford
Apter, H., George Washington '34, Hartford
Apuzzo, A. A., Tufts '36, Bridgeport
Arafeh, M K., Syrian '55, Middletown
Arcano, J. T., Temple '52, Southington
Archambault, H. A., Tufts '27, Norwich
Arena, A. J., Albany '60, Middletown
Argall T. R., P & S '61, Newtown (Hartford County)
Armbruster, L. D., Women's Med. Coll. '47, Cheshire
Armm, M. F., New Jersey Coll. Med. '65, Bridgeport
Arnault, D. G., Harvard '43, Middletown
Arnold, M., Harvard '29, Willimantic
Arnold, P. B., Tufts '67, Wallingford
Arnold, W. P., Jr., Columbia '46, Middlebury
Arnstein, R. L., Harvard '51, Hamden
Aromin, S. C., Santo Tomas '55, Norwich
Arons, M. R., Maryland '30, Hartford
Arons, M. S., Maryland '57, New Haven
Arturi, P. A., N. Y. U. '52, Greenwich
Aseltine, D. T., Jr., Vermont '51, Hartford
Ashcroft, A. D., Columbia '35, Pompano Beach, Florida (Fairfield County)
Asis, J., Cordoba Univ. Argentina '62, New Haven
Asken, S., Geneva '58, Stratford
Asuncion, C. M., Philippines '55, Hartford
Atchley, J. A., Columbia '44, New York City (Litchfield County)
Atkins, M. P., Univ. Coll. Cork, Ireland '57, Rockville
Atocha, J., San Marcos, Peru '59, New Haven
Atoynatan, T. H., Istanbul '44, Manchester (New Haven County)
Atwood, A. S., Yale '45, Torrington
Aube, L. A., McGill '43, New Brunswick, Canada (Fairfield County)
Audet, C. H., Maryland '17, Fort Lauderdale, Florida (New Haven County)
Audet, C. H., Jr., Maryland '46, Waterbury
Audet, R. J., Maryland '46, Waterbury
Auerbach, N. Basel '61, Norwalk
Auerbach, S. R., Tufts '63, Bridgeport
Austin, G. L., Pennsylvania '45, Hartford
Austrian, H., Zurich '55, Trumbull
Axiotis, A. H., Athens '46, Fairfield
Ayotte, L A., Laval '55, Bristol
Ayres, P. B., Toronto '32, Greenwich
Azar, M. A., St. Joseph '34, Danbury

Babcock, A. L., Jefferson '52, Hartford
Bachman, J. P., Buffalo '26, Newington
Bachner, P., Columbia '63, Greenwich
Backhus, L. C., Syracuse '33, Waterbury
Badan, B., Graz '58, Danbury
Badner, D. H., N. Y. U. '41, Meriden
Bader, L. M., S.U.N.Y. '67, Bridgeport
Bagdasarian, A. D., Stanford '62, Bristol
Baggish, M. S., Louisville '61, Hartford
Bagnall, J. S., Sheffield Un. '55, Hartford
Bagnall, R. S., Harvard '43, Bloomfield
Bailey, R. H., Vermont '55, Hartford
Baird, R. D., Washington '33, New Milford
Baird, W. H. Tufts '52, Milford
Baker, A. L., Virginia '28, Sheffield, Massachusetts (Middlesex County)
Baker, E. L., Yale '61 Derby
Baker, G. L., Washington '52, Hartford
Baker, J. H., Georgetown '56, Washington, D.C. (New London County)
Baker, P. G., Vermont '33, Winsted
Baker, S. M., Yale '64, New Haven
Bakunin, M. I., Jefferson '32, Bridgeport
Balazs, D. A., Budapest '40, West Haven
Baldwin, D. B., Temple '67, Essex
Baldwin, W. H., N. Y. Med. Coll '41, Manchester
Balfour, J. D., Western Ontario '25, Norwich
Ballard, C. J., Texas '51, Portland
Balletto, V., Tufts '33, East Haven
Balmaseda, R. Y., Havana '46, Danbury
Balsam, R. H., Queen's Un. '63, New Haven
Balsumi, S. J., Downstate Med. Ctr., '66, Danbury
Baltrucki, H. C., Vermont '52, Hartford
Banfield, R. S., Jr., Columbia '51, Stamford
Banks, D. T., Fordham '12, Bridgeport
Bannister, K. W., Ohio '40, West Simsbury
Bannon, F. M., Vermont '28, Stamford
Banyard, R. D., Columbia '67, Greenwich
Baptist, V., Boston Un. '42, Bristol
Barald, F. C., Boston '36, Hartford
Baratz, M. A., Rochester '50, New Haven
Barber, R. R., Vermont '30, Tucson, Arizona (Fairfield County)
Barbour, C. M., Jr., McGill '38, West Hartford
Barbour, P. H., Jr., Yale '41, Farmington
Bardenheier, J. A., St. Louis '63, Essex
Barese, A. M., Naples '35, Danbury
Barile, A. W., Loyola '43, New Haven
Barker, D. C., Maryland '40, Fairfield
Barker, N. J., Toronto '26, Collinsville
Barnett, R. N., Yale '38, Westport

Barney, W. E. Yale ’35, Milford
Baron, M. A., Albert Einstein ’61, Milford
Barrero, E. F., Santiago ’53, Bridgeport
Barrett, F. C., Vermont ’46, Norwich
Barrett, H. S., Harvard ’41, Hartford
Barry, E. A., Jr., Laval ’46, Moosup
Barry, J. C., Boston ’33, Manchester
Barry, R. M., Pennsylvania ’54, Mystic
Barry, R. T., Columbia ’46, West Hyannisport, Massachusetts (Hartford County)
Barse, R. J., Creighton ’64, New Haven
Barstow, R. I., Jefferson ’33, Norfolk
Bartlett, E. W., Yale ’67, New Haven
Barton, D. C., Rochester ’52, Portland
Barton, J., N. Y. U. ’58, Norwalk
Bartus, S. A., St. Louis ’58, Hartford
Barwick, P. E., McGill ’62, Avon
Barysh, N., Rush ’33, Danbury
Basden, E. H., Tufts ’33, Willimantic
Basile, J. X. R., Vermont ’53, Hartford
Baskin, A. H., Minnesota ’32, Bloomfield
Baskin, A. M., Albany ’52, New Haven
Basu, S. K., Calcutta ’60, Hartford
Batelli, C. F., Yale ’28, New Haven
Bates, D. H., Long Island ’39, Putnam
Batt, H. D., Hahnemann ’50, New Haven
Battista. A. W. Tufts ’24, New Haven
Bauer, W. F., Jr., N. Y. Med. Coll. ’50, Killingworth
Baum, S. J., Vermont ’48, Bridgeport
Bausch, C. P., Tufts 29, Farmington
Bauta, H. P., Univ. Havana ’60, Newtown
Baxter, M. F., Tufts ’53, Glastonbury
Bayer, A. E. Vermont ’48, New Britain
Bayless, A. E., Southern California ’45, Bridgeport
Beakey, J. F., Tufts ’43, Hartford
Bean, K. F., Tufts ’60, Bristol
Beardsley, F. A., Cornell ’43, Willimantic
Beasley, A. S., N. Y. U. ’47, Westport
Beatman, B., Albany ’52, New London
Beatrice, A. A., Tufts ’29, Bristol
Beatrice, M. A., Columbia ’56, New Haven
Beaty, J. T., Columbia ’43, Greenwich
Beck, D., Albany ’54, Westport
Beck, E. C., Yale ’26, New York City (Fairfield County)
Beck, E. M., Yale ’48, Greenwich
Beck, R. S., Temple ’50, Hartford
Beck, S. H., Rochester ’34, Bridgeport
Becker, A. H., Vermont ’43, Bristol
Becker, G. E., Yale ’55, Willimantic
Becker, I. W., Vermont ’52, Bristol
Becker, J., Univ. & Bellevue ’29, New London
Becker, M. S., Tufts ’67, Torrington (Hartford County)
Becker, P. A., Albany ’55, Hartford
Becker, R. E., McGill ’60 Madison
Beckett, R. S., Yale ’40, Hartford
Bedrick, M., Harvard ’43, New London
Bee, R. W., Jefferson ’60, New Britain
Beebe, J. T., Columbia ’38, Hartford
Beeble, J., Albany ’48, Waterbury
Behringer, F. R., Basel ’52, Waterford
Beinfield, M. S., Long Island ’45, Westport
Beizer, E., Long Island ’30, Hartford
Belkin, J. W., Maryland ’49, New Britain
Bellach, H., Long Island ’33, New Britain
Bellin, A., N. Y. U. ’45, Stamford
Bellis, J. M., Jr., Harvard ’51, Hamden
Bellizzi, J. J., Tufts ’47, Hartford
Bellobuono, J. R., Liege ’59, Middletown
Bellucci, A. L., Vermont ’54, South Glastonbury

Benavides, C. G., Pennsylvania ’60, Manchester
Bender, L., Hahnemann ’39, Colchester
Bender, M., Med. Coll. Virginia ’59, New Haven
Bender, S. H., Chicago ’61, Westport
Bendett, R. J., Tufts ’55, Hartford
Benjamin, B. I., Columbia ’61, Stamford
Benjamin, M. R., N. Y. Med. Coll. ’50, Stamford
Benkovich, G. O., Budapest ’30, Rocky Hill
Benninghoff, D. W., Columbia ’53, Greenwich
Benoit, R. J., Georgetown ’26, Clearwater, Florida (Hartford County)
Bensch, K. G., Erlangen ’53, Stanford, California (New Haven County)
Benton, A. J., State Univ., N. Y. ’57, New Canaan
Benton, P.E., Columbia ’34, Orleans, Massachusetts (New Haven County)
Beres, P., Columbia ’52, Westport
Bergendahl, G. T., Tufts ’61, Norwich
Bergendahl, H. A., Tufts ’33, Norwich
Berger, A., Zurich ’58, Shelton
Berger, D. S., S.U.N.Y. ’63, Danbury
Berger, J., Univ. Florida ’63, East Hartford
Berkley, R. B., Un. Penna. ’66, West Hartford
Berkun, S. G., Lausanne ’63, Bridgeport
Berland, R. H., Minnesota ’61, Hartford
Berlin, B. B., McGill ’56, Hartford
Berlowe, M. L., State Univ. N. Y. ’23, New Haven
Berman, L. H., Edinburgh ’49, Westport
Berman, S., Long Island ’43, New Haven
Bernacki, E. J., New Jersey Coll. Med. ’67, Torrington
Bernanke, M., St. Louis ’27, Southbury
Berneike, R. R., Western Reserve ’41, New Haven
Bernene, J. L., Albany ’67, Greenwich
Bernstein, A., N. Y. U. ’53, New Britain
Bernstein, A., Yale ’08, Bridgeport
Bernstein, C. M., N. Y. Med. Coll. ’54, New Britain
Bernstein, D. J., Vermont ’33, New Britain
Bernstein, J., Georgetown ’51, Bridgeport
Bernstein, L., Berne ’36, Hartford
Berry, R. W., Columbia ’50, Bridgeport
Bersier, A. M., Berne ’41, Bridgeport
Berte, J. B., Georgetown ’58, New Haven
Bertuch, A. W., Maryland ’60, Middletown
Berwick, P., N. Y. U. ’38, Moodus
Bessa, O., Jr., Parana-Brazil ’56, Stamford
Besser, E. L., Johns Hopkins ’37, Manchester
Betten, M. G., Albert Einstein ’66, Norwich
Biassey, E. L., Howard ’47, Stratford
Biehn, D. M. F., Queen’s ’37, Fairfield
Biehn, S. L., Toronto ’26, Bridgeport
Bielecki, C. E., Tufts ’39, Norwich
Billings, W. C., Columbia ’50, New Haven
Bingham, D. B., Columbia ’66, Salem
Binnie, H.S.P., Edinburgh, Scotland ’52, Bethel
Biondi, B, Tufts ’38, New Haven
Birchall, E. F., Vermont ’47, Latham, New York (New London County)
Bird, F. L., Cornell ’48, Willimantic
Bird, F. S., Vermont ’33, Bristol
Birge, E. B., N. Y. Med Coll. ’57, Stratford
Birge, H. L., Pennsylvania ’33, Hartford
Birnbaum, H. B., Royal Coll. England ’35, Madison
Birney, T. P., Northwestern ’39, Bridgeport
Bisceglia, J. G., Georgetown ’48, Greenwich
Bishop, C. C., Yale ’30, Wardsboro, Vermont (New Haven County)
Bisson, B. P., Vermont ’53, Waterbury
Bizzozero, O. J., Vermont ’27, Waterbury

Bizzozero, O. J., Jr., St. Univ. New York '62, Waterbury
Black, J. S., Stritch '59, Hartford
Blain, C. A., Ottawa '57, Waterbury
Blakeslee, Sister M. H., Ottawa '67, West Hartford
Blanchard, D. L., Yale '31, Branford
Blaney, C. C., Boston '40, Bridgeport
Blaney, L., Cornell '40, Mansfield Center
Blank, G. I., Bern '59, New Britain
Blank, M. B., Aberdeen '50, Bridgeport
Blank, S., Virginia '41, Waterbury
Blank, V. E., Free Univ. Brussels '54, Bridgeport
Blansfield, H. N., Yale '47, Danbury
Blau, J. S., Upstate Med. Ctr. '68, New Britain
Blechner, J. N., Yale '57, Farmington
Blodinger, I. E., Yale '25, Boca Raton, Florida (New Haven County)
Blogoslawski, W. J., Georgetown '27, New Britain
Bloom, D. I., Tufts '35, Thompsonville
Blossom, D. B., Columbia '38, Greenwich
Blum, L. M., Duke '55, Fairfield
Blumberg, J. M., N.Y.U. '66, Old Greenwich
Blumer, A. T., St. Un. N.Y. '66, Southington
Boas, N. F., Harvard '45, Wilton
Bobowick, A. R., Tufts '66, Waterbury
Bobrow, A., Berne '39, Hartford
Bobruff, J., Yale '55, New London
Bockar, J. A., Hahnemann '69, Stamford
Boelhouwer, C., Leiden '57, Hartford
Bogdan, P. E., N. Y. U. '58, Greenwich
Bogin, M., Yale '26, Bridgeport
Bohan, G. N., Amer. Univ. Beirut '44, Meriden
Boissevain, A. R., Jefferson '63, Seymour
Bolstad, R. A., Southern California '47, Norwich
Bolt, E. A., Jr., Johns Hopkins '50, Willimantic
Boltax, R. S., Boston '63, Derby
Boltax, S. P., Temple '62 New Haven
Bolton, J. D., Hahnemann '43, Greenwich
Bonaccorsi, B. I., Pisa-Italy '55, Waterbury
Bondy, P. K., Harvard '42, London, England (New Haven County)
Bonner, G. A., Vermont '45, New Haven
Bonner, R. A., Jr., Maryland '38, Waterbury
Bonnett, D. N., Illinois '43, Greenwich
Bonney, H. T., Toronto '52, Hartford
Book, D. T., Western Reserve '43, Hartford
Bopp, R. K., Vanderbilt '56, Willimantic
Borden, W. A., New York Univ. '58, Hartford
Boren, C. W., Washington Univ. '60, Hartford
Boreyko, C. J., Univ. Argentina '65, Bridgeport
Borger, A. P., Michigan '53, Stamford (New London County)
Bornemann, C., N. Y. Med. Coll. '40, Falls Village
Bornstein, H. D., Jr., Yale '53, North Haven
Borowy, J. E., Yale '50, Stamford
Borrelli, A. P., St. Univ. New York '60, Newtown
Borsos, L. A., Pazmany '50, Bridgeport
Bousa, W. S., N. Y. U. '48, Bridgeport
Bouthillier, J. E., Georgetown '61, Putnam
Bove, J. R., Maryland '53, New Haven
Bowen, F. D. T., Maryland '42, Hartford
Bowen, R. P., N. Y. Med. Coll. '52, Coventry (Windham County)
Bowen, W. R., Syracuse '53, Brookfield
Bower, B. F., Johns Hopkins '58, Hartford
Bower, R. S., Madras '45, New Britain
Bowers, G. N., Jr., Yale '54, Hartford
Bowman, S H. Hahnemann, Chicago '13, Naples, Florida (Fairfield County)
Boyd, J. E., Albany '62, Milford
Boyd, R. B., Tufts '41, Wallingford
Braat, J. P., Utrecht '30, Manchester
Braceland, F. J., Jefferson '30, Hartford
Brackett, J. W., Jr., Columbia '58, Waterbury
Bradburn, H. B., Vanderbilt '56, New Haven
Bradford, K. A., Downstate Med. Ctr. '65, New Haven
Bradley, E. G., Cornell '48, Bridgeport
Bradley, E. T., Cornell '36, Norwalk
Bradley, H. A., Jr., Cornell '40, Norwalk
Bradley, R. E., Jr., N. Y. U. '58, Woodbridge
Bradley, W. R., N. Y. Med. Coll. '49, Hartford (New Haven County)
Brady, J. J., Tufts '55, Hamden
Branch, J. C., Johns Hopkins '59, New Haven
Brand, E. S., N. Y. U. '43, New Haven
Brandon, K. F., Toronto '32, Hartford
Brandriss, J., Columbia '26, Bloomfield
Brandt, A. A., Yale '51, Milford
Branham, H. E. Jr., South Carolina '57, Stamford
Branom, W. T., Jr., New York Univ '60, Greenwich
Braren, C. H., Albany '62, Rocky Hill
Bratu, M., Bucharest-Rumania '51, Derby
Braun, R., Vienna '29, Bridgeport
Braun, R. W., Nebraska '65, Stamford
Braverman, I. M., Yale '55, New Haven
Bravo, A. J., Yale '64, Bridgeport
Bray, G. H., Vermont '47, New Britain
Breakell, E. S., Buffalo '47, Stamford
Breck, R. W., Yale '45, Wallingford
Breer, R. D., Harvard '54, Manchester
Brenneman, A. R., Yale '58, Hartford
Brensilver, H. L., Columbia '67, Mystic
Brewer, A. E., N. Y. U. '41, Lakeville
Brewer, F., Columbia '20, Bloomfield
Brewer, S. V. L., Hamburg '59, West Hartford
Brewer, T. F., III, New York '57, Old Saybrook (Hartford County)
Brewster, W. B., Jr., Harvard '42, Hartford
Brezina, P. S., Yale '40, Bristol
Bria, W. F., Rome '34 Cos Cob
Bridburg, R. M., Trinity Coll. Dublin '61, Hartford
Brier, H. D., N. Y. U. '34, Bridgeport
Briggs, H. C., Yale '57, Winsted
Briggs, R. S., Yale '61, Torrington
Brigham, J. C., Tulane '57, Hudson, Massachusetts (New Haven County)
Brink, A. J., Buffalo '62, New Haven
Britting, J. A., Albany '55, Windsor
Broady, H., St. Louis '41, Meriden
Brochin, M., Harvard '56, New Haven
Brock, W. H. McGill '45, Old Greenwich
Brockway, D. W., Long Island '43, Woodbridge
Brodey, J. F., Jefferson '66, West Hartford
Brodoff, M., Geneva '53, West Haven
Brodoff, S. S., N. Y. U. '46, New Haven
Brody, B. S., Yale '28, New Haven
Brody, D. M., Virginia '61 Norwalk
Brogden, J. M., Tufts '55, Guilford
Brooks, N. H., Hahnemann '68, Rockville
Brooks, P. L., McGill '32, Bridgeport
Brosnan, J. F., Tufts '30, New London
Brothers, D., N. Y. Med. Coll. '66, Milford
Brovender, A., Brussels '58, Norwalk
Brovender, S., Leyden '59, Norwalk
Brown, C. R., Cornell '45, New Canaan
Brown, D. A., Long Island '46, Darien
Brown, D. L., Columbia '55, Hartford
Brown, D. S., Cornell '45, New Canaan
Brown, F. F., Jr., Columbia '40, Torrington
Brown, H., St. Un. N. Y. '58, New London

Brown, H. J., Maryland '65, Norwalk
Brown, L., Jefferson '61, Hartford
Brown, M. R. S., Temple '43, Meriden
Brown, P. N., Hahnemann '43, Meriden
Brown, R. B., Cornell '47, Hartford
Brown, R. J., Maryland '44, Trumbull
Brown, W. M., Glasgow '42, Groton
Brown, W. T., P. P. Un. Budapest '32, Derby
Browne, E. R., Tufts '46, Willimantic
Browne, F. J., Nat'l. Univ. Ireland '58, Stamford
Browne, H. H., Albany '56, Southington
Browne, M. A., Cork '50, Stamford
Browning, L. D., Jr., Harvard '49, Stamford
Browning, S. P., III, Columbia '54, Norwich
Brubaker, R. E., Pennsylvania '36, New Haven
Bruno, J. J., Hahnemann '35, New Haven
Bruskin, C. E., Leipzig '32, Hartford
Buchalter, D. J., Michigan '63, Middetown
Buchman, J. G., N. Y. U. '57, Ridgefield
Buck, B. J., Harvard '26, West Hartford
Buckhout, G. A., Tufts '35, Bridgeport
Buckley, J. L., Tufts '40, Torrington
Buckley, M. B., National Univ. Ireland '57, Waterbury
Buckley, W. E., Boston '33, Middletown
Buckman, R. F., Long Island '45, Milford
Bucknam, C. A., Columbia '57, Hartford
Bucknam, F. G., Harvard '47, Hartford
Bucky, T. L., Yale '43, Weston
Buebendorf, D. P., Yale '60, Essex
Bujdud, C. M., Un. Puebla '52, Stamford
Bulaong, R. G., Sto. Tomas '54, Hartford
Bull, M. B., Columbia '62, Darien
Bull, S. M., Physicians & Surgeons '62, Stamford
Bullen, H. G., Pennsylvania '41, Stamford
Bullwinkel, G. A., Jr., Columbia '61, Stamford
Bunce, J. M., Yale '42, Hartford
Bundy, E. S., Vermont '48, Meriden (Hartford County)
Buol, R. S., Harvard '23, New Britain
Burack, J. O., Tufts '39, South Norwalk
Burbank, J., Harvard '43, Meriden
Burch, P. G., Johns Hopkins '63, Meriden
Burchell, R. C., Buffalo '54, Hartford
Burd, R. M., Columbia '63, Bridgeport
Burke, A. V., Georgetown '53, Norwalk
Burke, F. H., Georgetown '31, Rockville
Burke, G. F., Minnesota '54, Torrington (Hartford County)
Burke, J. F., Yale '31, Waterbury
Burke, W. H., Cornell '45, Bridgeport
Burkle, F. M., Jr., Vermont '65, Essex
Burnham, B. A., Tufts '34, Waterbury
Burnham, B. E., Pennsylvania '64, Hartford
Burnie, G. A., Yale '35, Danbury
Burns, D. W., Georgetown '65, Hartford
Burns, J. E., Tufts '40, Hartford
Burns, J. L., Graz '28, Hadlyme (Middlesex County)
Burrow, G. N., Yale '58, New Haven
Burton, G., New York Univ. '63, New London
Bush, H. S., Jr., Cornell '57, Rockville (Hartford County)
Butenas, C., Rochester '53, Meriden
Butler, R. W., Tufts '30, Cheshire
Butterfield, R. K., Tufts '50, Manchester
Butterfield, W. L., Jr., Harvard '41, Hartford
Byard, R. M., Woman's Med. Coll. Pa. '52, Bridgeport
Byer, S., George Washington '57, New Britain
Byrne, D. W., Columbia '27, Windsor Locks

Cacace, V. A., Loyola '39, Bridgeport
Cadelina, W. E. Santo Tomas '62 Derby
Calabresi, M., Florence '26, New Haven
Caldarelli, R. A., Loyola '47, Hartford
Caldwell, D. M., Jr., McGill '52, Manchester
Calio, J. V., Stanford '46, Hartford
Calise, P. J., Washington Univ. '55, Willimantic
Callahan, J. L., Georgetown '45, Newington
Callan, J. P., Univ. Coll. Dublin '63, Wethersfield
Calogero, J. A., N. Y. U. '63, Hartford
Camarda, A. L., Naples '41, Bridgeport
Cameron, I. R., Trinity Coll. Dublin 61, East Hartford
Cameron, N. A., Johns Hopkins '33, New Haven
Camilleri, J. A., Yale '55, New Haven
Camp, W. A., Emory '57, Greenwich
Campbell, I. G. Univ. Durham '58, Manchester
Campbell, M. F., Duke '61, Greenwich
Campbell, R. H., Wayne '35, Hartford
Campbell, S., Vermont '23, Meriden
Campione, M. P., Lausanne '54, Meriden
Caney, W. H., Albany '41, Watertown
Canfield, N., Michigan '29, Cuernavaca Morelos, Mexico (New Haven County)

Canniff, J. C., Cornell '43, Torrington
Canter, N. M., N. Y. U. '55, Bridgeport
Canty, W. P., Nat'l. Univ. Ireland '54, Putnam
Canzonetti, A. J., Chicago '44, Waterbury (Hartford County)
Capobianco, A. P., N. Y. Med. Coll. '40, Bridgeport
Capodilupo, V. M., Naples '54, Bridgeport
Cappelletti, A. J., Jefferson '46, Waterbury
Cappucci, L. W., Georgetown '53, New Haven
Carangelo, J., Tufts '38, Hartford
Cardin, M. J., Med. Coll. Georgia '64, Bridgeport
Cardone, M. J., Vermont '37, Bridgeport
Carelli, G. F., Yale '11, New Haven
Carey, T. B., Albany '44, Delray Beach, Florida (Hartford County)

Carey, W. C., Columbia '33, Meriden
Carignan, R. Z., Georgetown '40, Farmington
Carino, J. M., N. Y. Med. Coll. 66, Stamford
Carlson, C. E., Maryland '37, New Britain
Carlson, D. A., Yale '58, New Haven
Carlton, L. S., Harvard '52, Hartford
Carolan, P. J., Seton Hall '63, Bridgeport
Carpentieri, A. L., N. Y. Med. Coll. '38, Waterbury
Carpentieri, J. C., Lausanne '58, Hartford
Carr, M. F., Univ. Coll. Dublin '54, Windsor
Carrabba, S. R., Jefferson '46, Hartford
Carrol, J. E., Boston '25, West Hartford
Carroll, P. R., Jr., Georgetown '29, Bridgeport
Carroll, R. Mc., West Virginia '65, Westport
Carter, F. J., N. Y. U. '47, Norwich
Carter, M. G., Harvard '41, New Haven
Carter, M.K., Georgetown '52, Norwich
Cartland, J. E., Jr., Columbia '43, Hartford
Carvey, E. V., Yale '35, Wethersfield
Cary, J. M., Western Reserve '45, Newington (New Haven County)

Casale,, A. J., Hahnemann '60, Hartford
Caserta, S. J., Georgetown '37, Bridgeport
Casey, E. J., Georgetown '58, Bronx, New York (Hartford County)

Cashman, J. L., Hahnemann '37, North Haven
Cassell, R. T., Geneva '54, Westport
Cassin, C. M., New York Med. Coll. '59, New Haven
Cassone, R., Vermont '41, Stamford
Castagno, M. M., Boston '43, Hartford
Castagno, R. A., Columbia '41, Hartford
Castaldo, L. F., Tufts '37, Fairfield
Castiglione, F. M., N. Y. Med. Coll. '42, New Haven
Castro, R. P. Havana '45, Danbury
Catanuto, N. T., Dalhousie '61, Orange

Cavaliere, V. J., N. Y. U. '43, Bridgeport
Cavalieri, R. J., Jefferson '42, Wethersfield
Cavicke, D. C., Tufts '52, New London
Celentano, L. E. H., Hahnemann '30, New Haven
Cenci, V. P., Tufts '29, West Hartford
Cerritelli, D. H., New York Med. '62, Middletown
Ceulemans, C. P., Ghent '52, Middletown
Chace, C. W., Yale '52, Middletown
Chachkes, J. T., Chicago '58, New Canaan
Chadda, S. K. B., Andhra Med. Coll. '62, Bridgeport
Chait, S. A., Nebraska '40, Litchfield
Chamberlin, A. C., Boston Univ. '57, Stamford
Chambers, C. F., George Washington Un. '61, Ridgefield
Chan, D. W., Kwong Wah Med. Coll., '54, Norwalk
Chang, S. C., Seoul '47, New Haven
Chapnick, G. A., Vanderbilt Un. '64, Norwalk
Chapnick, M. H., Jefferson '32, Putnam
Charde, J. P. Pennsylvania '67, Sharon
Charendoff, L., Toronto '56, Manchester
Chartier, G. M., Boston '33, Danielson
Chasnoff, J. A., Long Island '36, West Haven
Chastanet, D. V. P., Montpellier '59, Milford
Chaucer, N. G., Columbia '41, Hartford
Chavez, A. E., Un. Santiago, Spain '64, Waterbury
Cheney, C. B., Yale '41, New Haven
Cherry, J. B., McGill '43, Danbury
Chester, L. L., Vermont '38, Hartford
Chetrick, A., Yale '53, New Haven
Cheung, E. H. F., Un. of the East '67, North Branford
Chiappinelli, D., Tufts '46, Milford
Chiaramonte, C. T., Long Island '26, Danbury
Chick, F. B., N. Y. Med. Coll. '46, Easton
Chiota, J. A., Vermont '37, Bridgeport
Chirot, M., Un. Paris, '39, Stafford Springs
Chobian, J. A., Loyola '33, Oxford
Choi, C. S., Seoul Nat'l. Un. '58, West Hartford
Chotkowski, L. A., Yale '42, Kensington
Christie, F. J., N. Y. U. '46, Greenwich
Christine, B. W., Albany '48, Litchfield
Chu, C. C. C., Sun Yat Sen Un. '57, Norwalk
Chumnanvech, N. L., Chlengmai Med. Sch. '67, Fairfield
Ciccarelli, A. W., Hahnemann '42, Bristol
Cimmino, G. N., Yale '60, Ansonia
Cipriano, A. P., Long Island '41, New Haven
Cirmo, W. F., Vermont '59, Wallingford
Citrano, E. C. Louvain '58, Trumbull
Clancy, J. J., Yale '31, Newington
Clapp, P., Harvard '52, New Britain
Clark, B. B., Cornell '37, New Britain
Clark, H. T., Jr., Rochester '44, Woodbridge
Clark, I., Albany '65, Hartford
Clark, M. H., Women's Medical '33, New Haven
Clark, M. L., Tufts '65, Washington
Clark, S., Jr., N. Y. Med. Coll. '57, Middletown
Clarke, C. C., Yale '32, New Haven
Clarke, H. M. Rochester '39, New Britain
Clarke, W. A., Georgetown '46, Hartford
Clarke, W. I., Harvard '41, South Daytona, Florida (New Haven County)
Clason, F. P., Harvard '15, West Hartford
Clayton, E. M., Yale '59, New London
Clayton, J. A., State Univ. N. Y. '54, Cos Cob
Cleary, H. J., Tufts '29, Watertown
Cleaver, R. S., Jr., Cornell '45, Bridgeport
Clement, D. H., Harvard '35, New Haven
Clift, G. V., Columbia '58, Fairfield
Climo, S., Ohio '29, New Haven
Cloonan, J. J., Georgetown '40, Stamford
Coassin, N. A., Yale '55, Milford
Coates, S. P., Maryland '34, Suffield
Cobb, R. J., N. Y. Med Coll. '57, Hartford
Cocilovo, V., Palermo '53, Meriden
Cody, T. P., Long Island '36, New Canaan
Coe, M. J., Queen's Univ. '57, Portland
Coe, R. E., Tufts '51, Hamden
Coelho, J. N., Lisbon '49, Hartford
Cogswell, L. P., Harvard '33, Hartford
Cohart, E. M., Columbia '33, New Haven
Cohen, B., Albany '42, Newington
Cohen, G. S., Yale '63, Orange
Cohen, H. R., Pittsburgh '66, Bridgeport
Cohen, I. S., S.U.N.Y. '67, Fairfield
Cohen, L. S., N. Y. U. '58, New Haven
Cohen, S. A., N. Y. U. '66, Guilford
Cohen, S. L., Buffalo '53, Bridgeport
Cohen, W., Western Reserve '56, Waterbury
Cohen, W., Yale '23, New Haven
Cohen, W. B., N.Y.U. '63, Fairfield
Cohn, G. L., Hahnemann '50, Hamden
Cohn, S. H., Boston '34, Hartford
Colburn, R. F., Vermont '37, Stamford
Cole, J. W., Washington '44, New Haven
Cole, M. J., St. Bartholomew's '39, Hartford
Cole, R. G., Meharry '44, New Haven
Coleman, J. V., Vienna '34, New Haven
Coleman, M., Long Island '42, Stamford
Coleman, P. J., Georgetown '54, Danbury
Coletti, L., Vermont '57, Norwich
Coley, G. M., Harvard '53, Hartford
Coley, M. S., Harvard '54, West Hartford
Collias, J. C., Yale '56, Hartford
Collins, J. O. Baylor '29, Watertown (New Haven County)
Collins, R. N., Yale '62, Sharon
Collins, W. F., Yale '47, New Haven
Colliton, R. J., Kansas '62 (Hartford County)
Colmers, R. A., Vienna '37, Savannah, Georgia (Fairfield County)
Colwell, B. S., Yale '48, Hamden
Colwell, H. S., Johns Hopkins '14, New Haven
Combs, J. T., Johns Hopkins '59, Wallingford
Comodo, N. M., Queens '35, Wethersfield (New Haven County)
Compson, F. E. M., Boston '20, Clinton, N. Y. (Middlesex County)
Conant, R. G., Georgetown '49, Hartford
Concannon, P. R., Nat'l Un. Ireland '64, Meriden (Middlesex County and New Haven County)
Conklin, C. T., Jr., Vermont '41, Thomaston
Conklin, T. J., Louisiana St. '66, Hartford
Connell, T. H., Jr., Michigan '45, Bridgeport
Connolly, A. J., Georgetown '28, New Haven
Connolly, J. P., Georgetown '36, Stamford
Connor, G. M., Boston '35, Plantsville
Conrad, C. C., Tufts '54, Colchester
Conroy, J. T., Vermont '55, West Hartford
Conroy M. M., Cornell '59, Meriden
Conte, B. L., N. Y. Med. Coll. '50, New Haven
Conte, H. C., N. Y. U. '54, New Haven
Conte, M. G., Naples '35, New Haven
Conway, D. F., Jr., Columbia '37, New Haven
Conway, E. J., Yale '44 Hartford
Conway, M., St. Bartholomew's '43, West Hartford
Cook, D. E., Cincinnati '55, Old Saybrook
Cook, T. J., Pennsylvania '59, Norwich
Cook, W. H., Western Ontario '47, Bridgeport
Cooke, R. W., Yale '43, Hartford
Coolidge, P. M., George Washington '62, Fairfield

Coomaraswamy, R. P., N. Y. U. '59, Greenwich (Litchfield County)
Cooney, G. E., Nebraska '60, Bridgeport
Cooper, D. W., Pennsylvania '54, New London
Cooper, M., Cornell '48, Bridgeport
Cooper, P. A., State Univ. N. Y. '53, Hartford
Cooper, R. A., Rochester '60, New Haven
Copeck, G., Zurich '56, Stratford
Coppes, H. R., Amsterdam '57, Milford
Coppeto, C. J., Marquette '39, Waterbury
Coppola, E. A., Long Island '10, Waterford
Coppola, P. J., Georgetown '69, New Haven
Coral, M., University of Zurich (Switzerland) '39, Terryville
Corazzelli, F. G., Jr., Bologna '56, Trumbull (New London County)
Corcoran, M. A., Tufts '30, Cromwell (Hartford County)
Corey, J. M., Tufts '59, Norwalk
Corey, W. Van A., George Washington '33, Hamden
Corley, E. H., Howard '49, Bridgeport
Cornacchia, R., Naples '51, Naugatuck
Cornelio, F. J., Georgetown '34, Winsted
Cornett, S. J., Queens '55, Cromwell
Corradino, C. L., Tufts '29, New Haven
Corridon, J. D., Georgetown '28, East Norwalk
Corsaro, T. P., State Univ. New York '56, Milford
Corso, P. F., Tufts '52, Bridgeport
Corwin, D. B., Syracuse '32, Norwalk
Corwin, H. R., Long Island '42, Norwalk
Cosentino, R. T., Georgetown '62, New Britain
Coshak, M., Boston '37, Waterbury
Costa, P. J., Yale '55, Jewett City
Cottiero, T., Yale '26, Waterbury
Cottle, R. D., McGill '60, Stamford
Couch, F. H., Yale '30, Cromwell
Coughlin, F. R., Jr., Yale '52, Stamford
Coulson, L. A., St. U. N. Y., N. Y. C. '52, New London
Cousins, M. L., Vermont '52, New Haven
Covey, W. G., Physicians & Surgeons '62, Stratford
Cox, M. E., Cincinnati '36, Waterbury
Coyle, T. F., State Univ. N. Y. '63, Bridgeport
Coyne, E. A., Queen's Univ. Belfast '63, Wethersfield (Tolland County)
Cozzolino, E. N., Harvard '33, West Haven
Craighill, M. D., Johns Hopkins '24, Jamestown, Rhode Island (New Haven County)
Cramer, S. L., N. Y. Medical '41, Hartford
Crampton C. B., Yale '37, Middletown
Crane, J. E., Vermont '39, Springdale
Cranston, R. W., Jr., Albany '46, Norwich
Crary, H. I., Columbia '48, New Canaan
Craven, R. O., N. Y. Med. Coll. '62, Newtown
Crawford, J., Howard '59, Hartford
Creatura, J. A., Yale '58, Bridgeport
Creaturo, N. E., Boston '31, Trumbull
Cressy, N. L., Yale '39, Norwich
Crisafi, B. R., Stritch '63, Greenwich
Crispin, M. A., Temple '41, West Palm Beach, Florida (Hartford County)
Crombie, H. D., Jr., Tufts '61, Hartford
Cronan, T. L., Stritch '56, Trumbull
Cronin, M. T. I., Georgetown '65, New Haven
Cronin, R. J., N. Y. Medical '59, Hartford
Cronin, W. T., New York Med. Coll. '59, Norwalk
Crossman, W. F., Georgetown '65, Trumbull
Crothers, C. H., Yale '44, New Britain
Crowley, J. W., Catholic Univ. '54, New Britain
Crown, C. A., Illinois '47, New Canaan
Crowther, D. F. S., N. Y. Med. Coll. '64, Cromwell
Crupi, C., Bologna Univ. '52, Waterbury
Csovanyos, L., Budapest '39, East Norwalk
Cuello, R. A., Santo Domingo Univ '53, Bridgeport (New London County
Cullen, C. F., Jefferson '48, Hartford
Cullen, J. R., Georgetown '36, Somers
Cullen, M. T., Woman's Med. Coll. Pennsylvania '56, West Hartford
Cullina, J. C., George Washington '48, Hartford
Culotta, C. S., Yale '28, Hamden
Cunin, B. M., Temple '62, Hartford
Cunningham, P. R., Yale '49, Guilford
Cunningham, R. D. M., Yale '30, Southbury (Fairfield County)
Curi, J. F. J., Yale '64, Torrington
Curis, F. T., Georgetown '56, Hartford
Curley, W. H., Jr., Cornell '38, Bridgeport
Curran, J. J., Georgetown '61, Hartford
Curran, T. L., Boston U. '39, Hartford
Curtis, B. H., Columbia '36, Newington
Curtis, J. P., Albert Einstein '64, Sharon
Curtis, W. B., Columbia '34 Fort Lauderdale, Florida (New Haven County)
Cusanelli, G. N., Long Island '46, New Haven
Cushman, G. L., Tufts '43, Woodbury
Cushman, L. A., Harvard '24, West Hartford
Cusnir, M., Frankfurt '36, Meriden
Cutler, H. J., New York Med. Coll. '59, Waterbury
Cutler, H. S., St. Louis '37, New Haven
Cwik, R. A., Tufts '66, Guilford
Czaja, R. J., Tufts '53, Thompsonville
Czarsty, J. C., Georgetown '54, Oakville (New Haven County)
Czuczka, P., Albert Einstein '70, Westport
da Costa, J. F., Lisbon '55, Hartford
D'Aiuto, M. L., St. Louis '60, Bridgeport
Dake, P. D., Univ. Lausanne '62, Hartford
Dalal, B. J., G. S. Med. Coll. '64, East Norwalk
Dalal, B. J., Sheth G. S. '59, Bridgeport
Dalburg, L. A., Jr. N. Y. Medical '58, New Britain
Dale, P. W., Harvard '47, Greenwich
D'Alessio, C. M., Maryland '37, New Haven
Dallas, M., Boston '22, New Haven
D'Alotto, J. A., State Univ. N. Y. '63, Hartford
Daly, J. E., Tufts '44, Waterbury
Dambeck, A. B., Vermont '54, Tolland
D'Ambruoso, D. C., Columbia '36, West Hartford
Damiani, R. A., Tufts '33, Wolcott
D'Amico, M., Yale '31, New Haven
Danaher, T. H., Yale '57, Torrington
Danaher, T. J., Yale '28, Torrington
D'Andrea, F. H., Yale '29, Shoreham, Vermont (Fairfield County)
Danehower, R. L., Pennsylvania '65, Greenwich
D'Angelo, A. J., Rome '42, Southington
D'Angelo, D. A., Georgetown '55, Waterbury
D'Angelo, E. J., Rome '42, Southington
Daniels, D. S., Virginia '69, Waterbury
Daniels, E. H., Jr., Howard '52, Hartford
Daniels, G. B., New York Med. Coll. '68, Newington
Daniels, J. C., Rochester '56, Danbury
Danigelis, J. A., Vermont '59, East Hartford
Dann, O. T., Yale '62, New Haven
Danoff, S. J., N. Y. U. '55, Stamford
Danyliw, J. M., Jefferson '47, East Hartford
Danzig, S. D., Lausanne '37, New Milford
D'Apice, J. P., St. Louis Un. '65, Fairfield
Darrow, J. E., Tufts '28, New Britain
Daukas, C. G., Yale '55, East Hartford
Daukas, N. J., N. Y. U. '47, Middletown

Dauphinais, R. M., St. Louis '61, Hartford
Dautrich, A. W., Yale '39, Litchfield
Davenport, J. J., Jr., Georgetown '59, Farmington
Davey, L. M., Yale '43, New Haven
David, N. D., Teheran '43, West Hartford
Davidson, A. C., New York '62, Derby
Davie, R. N., Louisiana '44, Waterbury
Davis, C. D., Johns Hopkins '39, New Haven
Davis, J. B., Kansas '33, Whitestone, Virginia (New Haven County)
Davis, J. M., Yale '60, Chicago Illinois (New Haven County)
Davol, R. T., Columbia '41, Greenwich
Dawe, E. L., London '48, Danbury
Day, E. J., N. Y. Med. Coll. '54, West Haven
Dayton, C. J., Temple '47, Cheshire
Dayton, N. A., Ohio '15, Clearwater, Fla. (Windham County)
Dean, M. A., Tufts '43, Bridgeport
Dean, P. M., Columbia '44, Greenwich
Dearani, A. C., Georgetown '53, Norwalk
DeBernardo, R. L., Georgetown '63, Bridgeport
DeCarlos, K. A., Tufts '64, Hartford
deChabert-Ostland, J. G., Paris '34, Hartford
deCholnoky, T., Budapest '28, Greenwich
De Dios, V. K., Santo Tomas '64, New Haven
Deduk, N. T., Woman's Med. Coll. Pa. '54, Seymour
Deduk, V. J., N. Y. Med. Coll. '54, Seymour
'de Escobar, D. M., Un. Sao Paulo '54, Waterbury
deForest, G. K., Yale '32, New Haven
DeFusco, L. A., Georgetown '62, East Hartford
DeGraff, A. C., Jr., N. Y. U. 55, Hartford
deGroot, T. J., Nat'l. Un. Ireland '66, Norwich
DeKlyn, W. B., Temple '41, Danbury
Delany, F., Columbia '45, Greenwich
Delevett, A. F., Johns Hopkins '40, Bridgeport
Delgado-Fourzan, E., Mexico '43, Hartford
Delgrego, A. L., George Washington '30, New Haven
D'Elia, F. G., Georgetown '53, Southport
D'Elia, P. F., Tufts '44, New Haven
DeLibero, A. F., Rome '45, Stratford
Della Valle, L., Bologna '60, Hamden
Delligan, F. W., Georgetown '41, Hartford
Delohery, C. L., Temple '26, Lake Worth, Florida (Fairfield County)
DelPizzo, A., Bologna '57, New Haven
DeLuca, J. V., Georgetown '47, Bridgeport
DeLuca, V. A., Jr., Long Island Coll. Med. '48, Derby
DelVecchio, L. F., Georgetown '31, Bridgeport
DeMaio, J. T., Tufts '60, Hartford
DeMarchena, J. E., Rio de Janiero '57, Waterbury
Deming, A. S., Harvard '40, Hartford
Deming, C. D., Johns Hopkins '10, West Hartford
Deming, E. G., Harvard '40, Hartford
Demir, P., New York Med. Coll. '59, New Haven
Demko, R. M., N. Y. U. '54, Manchester
DeNegre, L. M., Seton Hall '60, Milford
DeNicola, Michael, Yale '54, Prospect
Dennen, P. C., Univ. Buffalo '49, Waterbury
Denton, C. R., Vermont '48, Hartford
DePasquale, F. L., Pennsylvania '26, Hartford
DePasquale, J. A., Pennsylvania '36, Hartford
DePetrillo, B., Bologna '54, Waterbury
DePonte, R. J., Yale '61, New Haven
Derby, J. H., McGill '60, New London
Deren, M. D., Syracuse '33, Bridgeport
Derkash, S. L., Hahnemann '40, Greenwich
Desmond, C. T., Boston U. '38, Bethesda, Maryland (Hartford County)
D'Esopo, J. N., McGill '31, New Haven
de Suto-Nagy, G. I., Royal Hung. '35, West Haven
de Suto-Nagy, I. K., Royal Hung. '15, New Haven
DeTora, A. M., Boston '40, Stafford Springs
Deutchman, R. F., Un. Berne '66, Stamford
Devenis, M. M., Yale '19, Santa Monica, California (New Haven County)
DeVille, D. B., Nat'l. Univ. Ireland '56, Middletown
DeWitt, E. N., Pennsylvania '17, Fairfield
Dey, F. L., Northwestern '44, New London
Diamond, E. H., Breslau '32, Norwalk
Diaz, A., Mexico '56, Putnam
DiBella, R. J., Laval 62, North Grosvenordale (New London County)
Dickinson, G. H., Vermont '46, Meriden
Dickinson, W. W., Pennsylvania '42, Yalesville
Dickson, C. M., Jefferson '66, Hartford
DiCorato, F., Bari '50, Norwalk
Diggs, A. M., Maryland '52, Waterbury
DiGiandomenico, A. T., St. Louis '41, Meriden
Dignam, B. S., Yale '35, Thompsonville
DiGrazia, P. V., Lausanne '61, Brookfield
DiLorenzo, S. F., Tufts '43, Waterbury
DiMeola, H. J., Albany '68, Stafford Springs
Dimlich, H. K., Hahnemann '58, West Simsbury
Dineen, J. P., Cornell '55, Derby
Dinep, M., Bern '56, New Britain
Dingman, P. V., Columbia P. & S. '42, Waterbury
Dinolt, R., Vienna '30, Putnam
Dion, A. J., Tufts '28, Hartford
Dion, J. A., Georgetown '37, Hartford
Diskan, A. E., Temple '37, Manchester
Diters, E. N., Tennessee '48, Collinsville
Dobbs, W. G. H., Rochester '34, Portland, Oregon (Litchfield County)
Dobrow, R. J., Harvard '60, Hartford
Dobson, J. P., Columbia '36, Arcadia, Florida (Fairfield County)
Dock, D. S., Johns Hopkins '54, Seattle, Washington (New Haven County)
Doctor, D. W., N. Y. Med. '52, Westport
Doctor, J. E., Downstate Med. Ctr. '59, Westport
Doctoroff, S. J., Columbia '64, New Britain
Dodd, A. H., Temple '48, Willimantic
Dodd, S. G., Temple '48, Willimantic
Doering, E. G., Bonn '53, Greenwich
Doering, R. W., Kansas '48, Bridgeport
Doerr, W. J., Erlangen '40, Hartford
Doheny, J. J., N. Y. Med. Coll. '56, Derby
Doherty, H. E., Georgetown '55, Bridgeport
Doherty, R. C., Vermont '47, West Hartford
Dolan, E. P., McGill '50, Bridgeport
Dolan, V. L., State Univ. New York '56, Torrington
Dolberg, H. M., Leiden '58, Westport
Dolinsky, A. H., N. Y. Med. School '51, New Haven
Dombrowski, E. H., St. Univ. New York '61, Stamford
Donadio, J. A., Yale '66, Middletown
Donnelly, J., Liverpool '38, Hartford
Donnelly, J. E., State Univ. New York '58, Bethany
Donnelly, J. F., State Univ. New York '58, Derby
Donnelly, V. P., McGill '56, Bridgeport
Donnelly, W. A., Yale '34, Bridgeport
Donohue, S. M., Tufts '48, Windsor
Donovan, J. F., Harvard '52, Hartford
Donovan, T. J., Harvard '46, Hartford
Donovan, W. F., Boston '31, West Hartford
Dooley, J. A., St. Louis '55, Portland
Dorantes, J., Mexico '54, New London
Dorfman, G., Tulane '50, New Britain
Dorian, E., Maryland '37, New Britain

Dorian, E. C., Cornell 49, Hartford
Dorison, E. E., Berne '56, Westport
Dorr, J. R., Yale '57, Darien
Dougherty, A. J. Univ Coll Galway '60, Hartford
Douglas, H. J., Iowa '57,Cheshire (Hartford County)
Douglass, E. L., Long Island '16, Hingham, Massachusetts (New London County)
Dowaliby, J. M., II, Yale '67, New Haven
Dowling, K. V., New York '57, Hartford
Downer, M. C., Boston '29, West Hartford
Downing, L. C., Meharry '60, New Haven
Downs, E. F., Johns Hopkins '37, Bronxville, New York (Litchfield County)
Doyle, F. W., Yale '55, Willimantic
Doyle, K. A., Georgetown '46, Stamford
Dragon, R. E., Yale '66, New Britain
Draper, T. F., Queen's '55, Newtown
Dressler, D. M., Chicago '64, Orange
Dreyer, N. P., N.Y.U. '67, Stamford
Driscoll, A. J., Boston '47, Bristol
Drobnes, S., Freiburg '37, Norwich
Drury, R. W., Duke '64, Glastonbury
Duboczy, J. B., St. Un. New York '67, Hartford
Dudac, T. W., Georgetown '33, Southington
Dudley, J. P., Minnesota '57, Greenwich
Dudzic, A. L., Ottawa '58, Waterbury
Dufort, R. T., Georgetown '64, North Grosvenordale
Dugas, J. A., Loyola '38, Bridgeport
Duke, M., N. Y. U. '54, Manchester
Duksa, W. J., Georgetown '37, West Hartford
Dun, A. A., Harvard '45, Hartford
Dunn, H., Amsterdam '58, Hartford
Dunn, M. L., N. Y. U. '43, New Britain
Dunne, M. J., Queen's Univ. Belfast '58, Alexandria, Virginia (Hartford County)
Dunsmore, R. H., Hahnemann '43, Hartford
Durkee, R. E., Jr., Harvard '36, West Hartford
Dushane, J. E., Tufts '36, Hartford
Dutton, R. S., McGill '63, Winsted
Duzmati, P. P., Jefferson '36, Bridgeport
Dworken, D. S., Boston '55, Bridgeport
Dwyer, G. K., Rochester '43, Norwalk
Dwyer, H. L., Jr., Northwestern '43, New Haven
Dwyer, R. T., Tufts '50, Granby
Dwyer, T. A., Georgetown '39, New Fairfield
Dwyer, W. J., Tufts '50, Granby
Dy, A. J., Un. of the East '66, New Haven
Dyer, C. E., Tufts '28, New London
Dyer, C. F., Cornell '47, New London
Dyer, R. H., Jr., Cornell '63, Waterbury
Dzubaty, M., Buffalo '48, West Haven

Eadie, F. S., Tufts '48, Norwich
Eagan, E. C., Albany '43, Hartford
Earle, B. B., Rush '30, Glastonbury
Earle, L. H., Jr., Tufts '50, West Hartford
Eaton, H. E., Vermont '49, Pomfret
Ebbert, A., Jr., Virginia '46, New Haven
Ebers, T. M., Nebraska '31, Sedona, Arizona (Hartford County)
Echental, A. A., Geneva '63, Stamford
Eckels, H. S., Hahnemann '48, Bridgeport
Eckhardt, W. F., Jr., N. Y. U. '53, New Canaan
Eddy, J. R., Vermont '53, Manchester
Edelson, M. H., Chicago '55, New Haven
Edelstein, S. W., Hahnemann '57, Hartford
Edgar, E. E., Tufts '61, East Lyme
Edgar, M. S., Jr., Columbia '59, Norwich
Edkin, R. E., Howard '59, Hartford
Edmonstone, W. M., Rochester '43, Mystic
Edson, D. H., Vermont '42, Danbury
Edson, R. C., Jefferson '31, St. Augustine Shores, Florida (Hartford County)
Edwards, H. R., Coll. Med. Evangelists '18, New Haven
Edwards, L. E., George Washington '47, Fairfield
Egan, D. F., Tufts '43, New Britain (New Haven County)
Egee, J. B., Hahnemann '34, Newtown
Egloff, F. R. L., Harvard '47, Woods Hole, Massachusetts (Hartford County)
Ehrlich, E. L., Bern '58, West Hartford
Eilbergas, M., Zurich '41, Windsor Locks
Eimas, A., Tufts '30, Bridgeport
Eisen, S. L., Albany '66, Waterbury
Eisenberg, J. H., State Univ. N. Y. '62, Bridgeport
Eisenberg, S. E., Rochester '39, New Britain
Elder, W. J., Charing Cross Hosp. '55, Stamford
Elgosin, R. B. McGill '40, Milford
Eliasoph, J. L., N. Y. U. '49, Stamford
Eliasoph, J., N. Y. U. '49, Stamford
Elliott, F. G., Jr., Howard '40, Bridgeport
Elliott, J. R., Boston '32, Canaan
Elliot, K. G., Tufts '26, West Hartford
Ellis, G. D., Albany '50, Waterford
Ellis, L. G., Jefferson '20, West Hartford
Ellis, W. A., Jefferson '40, Hartford
Ellison, M. M., Rochester '43, New London
Ellrich, D. L., Jefferson '28, Westport
Ellzey, W. J., Tulane '64, Willimantic
Elser, J. P., Georgetown '56, Naugatuck
Ely, J. G., Harvard '23, Lyme
Emery, F. M., Columbia '29, New Haven
Emmel, R. C., Cornell '45, West Hartford
Eng, G. O., Yale '49, Stamford
Engel, H. P., Durham, England '55, Bridgeport
Engelke, H. A., N. Y. Med. Coll. '59, Gales Ferry
Enowitch, B. I., Univ. Geneva '66, Hartford
Enriquez, A. R., San Marcos '63, New Britain
Ephraim, P. D., Albert Einstein '65, Orange
Epstein, B., Vienna '36, Danbury
Epstein, E. J., N. Y. Med. Coll. '45, Stamford
Epstein, J. I., Yale '43, Middletown
Erami, M., Geneva '56, Bristol
Eras, P., S. U. N. Y. '60, Bridgeport
Erba, S. M., Hahnemann '45, Woodbridge
Erdelyi, P. G., Pazmany Peter '41, Stamford
Ergin, M. T., Istanbul '50, Hartford
Erichson, R. B., Cornell '60, Stamford
Errera, P. L., Harvard '53, West Haven
Erickson, G. C., Tufts '31, Rockville
Errico, A. V., Naples '59, North Haven
Esdaile, W. W., Meharry '62, New Haven
Eslami, M. S., Tehran '57, Waterbury
Esposito, J. J., Columbia '37, Bridgeport
Esposito, M. J., Boston '49, Meriden
Estela, J. A., Un. Santo Tomas '64, Bristol
Estrada, J. A., Santo Domingo '54, New Milford
Etkind, E. L., Albert Einstein '62, New Haven
Etkind, M. G., Maryland '33, New Haven
Evans, D. T., Vermont '62, Newtown
Evans, J. E., Mississippi '68, Hartford
Evans, T. S., Columbia '21, New Haven
Evarts, J., Columbia '29, Millerton, New York (Litchfield County)

Fabbri, R., Jr., Yale '64, New Haven
Fabrizio, T. I. J., Helsinki '57, Norwalk
Fabro, J. A., Tufts '37, Torrington
Fagan, F. J., Boston '38, New London

Fagan, F. X., Cornell '33, Wethersfield
Fahey, P. J., Nat'l. Univ. Ireland '55, Fort Wayne, Indiana (Hartford County)
Faiaz, E. K., Tehran '51, Hartford
Fairlie, C. W., Jr., Columbia '41, Hartford
Fakkel, M. J., Tufts '50, Stamford
Falk, M., Lausanne '61, Naugatuck
Falkenstein, R. J., Yale '69, Danbury
Falsone, J. J., Long Island '47, Norwalk
Fand, R., N. Y. U. '62, Danbury
Fanning, J. B., Nat'l. Univ. Ireland '57, North Haven
Fanslow, A. W., New York '55, Stratford (New Haven County)
Farber, L. R., S. U. N. Y. '65, New Haven
Farland, V. L., Montreal '25, Fort Lauderdale, Florida (Hartford County)
Farmer, D. A., Harvard '42, New Haven
Farrell, H. F., N. Y. Medical '54, Torrington
Farrell, J. E., Georgetown '52, Stamford
Farrell, R. F., Vermont '42, Stamford
Fasanella, R. M., Yale '43, New Haven
Fasano, L. A., New York '55, New Haven
Fauliso, R. J., Tufts '60, Hartford
Favata, J., Lausanne '58, Waterbury
Fay, W. J., Harvard '14, Hartford
Fazzone, A. C., Seton Hall '61, Bridgeport
Fazzone, P. R., Yale '58, New Haven
Fearon, H., St. Univ. New York '27, Washington
Fearon, R. E., Harvard '61, New Haven
Federico, F. N., Jefferson '65, Bridgeport
Federico, J. V., Harvard '66, Madison
Feeney, T. M., Boston '36, West Hartford
Fegley, H. B., Hahnemann '34, Danbury
Feierstein, S., Zurich '63, Trumbull
Felber, J. H., Vienna '45, West Hartford
Felder, E. A., Jefferson '48, Norwalk
Feldman, D. E., Yale '71, North Haven
Feldman, M. G., Boston '58, Bridgeport
Feldman, P., Med. Coll. Georgia '61, Hartford
Feldman, S. M., Boston '54, Bridgeport
Fenaughty, R. W., St. Univ. N. Y. '57, New Britain
Fenn, J. E., Yale '61, New Haven
Fenney, P. W., Tufts '31, Newington
Fenton, R. H., Lausanne '57, New Haven
Feola, B. J., Maryland '60, Branford
Ferando, L. J., Bologna '62, New Haven
Ferguson H. K., N. Y. U. '32, Waterford
Ferguson, J. F., Jr., Yale '40, Wallingford
Fernand, E. G., Yale '55, Danbury
Feroleto, G. J., Vermont '59, Bridgeport
Ferranti, R. D., Rome '52, Hamden
Ferrari, D. A., Columbia '63, Manchester
Ferraro, R. W., Creighton '63, Waterbury
Ferris, J., Columbia '43, New Milford
Fessel, J. M., Yale '63, New Haven
Fezza, A. J., New York '65, Hamden
Fezza, M. L., New York '54, Hamden
Fialkoff, R., Havana-Cuba '48, Manchester
Fiducia, J. P., Queen's Un. Belfast '65, Middletown
Fieldman, A., Tufts '51, Hartford
Fierberg, A. A., Pittsburgh '49, Hartford
Fierman, L. B., Western Reserve '46, Portland (New Haven County)
Figueroa, F. J., Mexico '50, Enfield
Filan, J. K., National Un. Ireland '54, Derby
Filer, H. L., Jr., Yale '46, New Haven
Filewicz, S. P., N. Y. Med. Coll. '59, New Britain
Filinson, R. N., St. Un. N.Y. '68, Winsted
Filson, R. M., Queen's '15, Wethersfield
Fincke, C. L., Harvard '28, Stamford
Fine, B., Jefferson '32, Stamford
Fine, J., Pennsylvania '31, Stamford
Fink, H. D., Louisville '54, Milford
Finkelstein, H. I., Washington Univ. '61, New Britain
Finkelstein, J., Un. Pennsylvania '60, Sharon
Finkelstein, W., Harvard '34, Waterbury
Finley, G. C., Tufts '24, West Hartford
Finn, A. J., Bowdoin '21, Waterbury
Finn, A. J., Jr., Jefferson '60, Torrington
Finn, F. W., Columbia '38, Greenwich
Finnie, J. N., Un. Alberta '63, Torrington
Fischbein, F. I., N. Y. Med. Coll. '63, Middletown
Fischer, D. G., Vermont '57, Hamden
Fischer, D. S., Harvard '55, New Haven
Fischer, J. J., Harvard '61, New Haven
Fischl, R. A., Durham, England '51, Danbury
Fishbone, G., Univ. Sheffield '58, Hamden
Fisher, L. C., Columbia '55, Stamford
Fisher, R. L., Columbia '40, Sharon
Fisher, R. L., Yale '59, Hartford
Fisher, W. H., Jr., Tufts '58, Waterbury
Fishman, R. S., Geneva '56, Hartford
Fiske, M., Boston '27, Ridgefield
Fiskio, P. W., Yale '27, New Haven
Fitzgerald, J. R., Yale '57, East Hartford
Fitzpatrick, E. E., Maryland '15, St. Petersburg, Florida (New Haven County)
Fitzpatrick, E. J., McGill '42, New Haven
Fitzpatrick, W. F., Cornell '38, Norwalk
Flagg, J. A., Temple '51, Bridgeport
Flagg, S. V., Columbia '62, New Haven
Flaherty, C. V., Yale '10, West Hartford
Flaherty, M. V., Georgetown '43, Hartford
Flamm, G. H., Long Island '43, New Haven
Flanagan, E. P., Univ. Coll. Dublin '58, Manchester
Fleck, S., Harvard '40, New Haven
Fleisch, M. C., Tufts '40, Hartford
Fleisher, P., Western Ontario '44, Bridgeport
Fleisher, P. R., Basle '58, New London
Fleming, R. J., Tufts '56, Stamford
Flemister, A. S., Howard '54, Bridgeport
Flescher, R., Harvard '61, Hartford
Fletcher, R. G., Harvard '53, Winsted
Flint, J. F., Columbia '66, Waterbury
Floch, M. H., New York '56, Norwalk
Flom, L., N. Y. U. '50, Fairfield
Flores, J. C., Cordoba Nat'l. Un. '60, Ansonia
Flores, P., Un. Santo Tomas '63, Wallingford (Hartford County)
Flynn, C. T., Jr., Yale '43, Meriden
Flynn, E. J., Long Island '43, Norwalk
Flynn, F. J., Virginia '43, Newington
Flynn, H. A., Yale '27, New Haven
Flynn, J. B., Jefferson '44, Meriden
Flynn, J. D., Georgetown '64, Willimantic
Flynn, J. H., Yale '45, New Haven
Flynn, T. G., Georgetown '59, New Canaan
Flynn, W. H., Maryland '16, Bristol
Fogel, D. H., Duke '38, Greenwich
Fogelman, H., Lausanne '52, Stamford
Fogg, L. B., Washington '60, East Hartford
Foley, F. X., Boston '34, Bridgeport
Folk, J. J., Georgetown '65, New Britain
Fons, A. L., III, Yale '57, West Hartford
Foohey, F. C., Laval '43, Hartford
Foote, F. M., Yale '33, Wethersfield

Forbes, J. D., Temple '64, Southbury
Force, B. R., N. Y. Med. Coll. '42, Groton
Ford, J. R., Albany '64, Windsor
Forman, J. B., Yale '39, New Haven
Formica, J. J. Tufts '55, New Britain
Fornshell, R. P., Harvard '52, Danbury
Fortier, N. L., McGill '43, Hartford
Fortin, V. L., Jr., Howard '59, Hartford
Foss, B. A., Boston '54, New London
Foster, J. H. Columbia '54, Hartford
Foster, J. H., Pennsylvania '17, Waterbury
Foster, K. W., Jr., Tufts '57, West Hartford
Fournier, R. E., Tufts '50, New Haven
Fowler, G. A., Columbia '40, Sharon
Fowler, R. N., Columbia '34, Ramsey, New Jersey (New London County)
Fox, B. M., Tufts '55, Hartford
Fox, E. F., N. Y. Med. Coll. '58, Bristol
Fox, G. G., Harvard '34, Meriden
Fox, H. J. Hahnemann '52, Bridgeport
Fox, J. C., Jr., Johns Hopkins '20, West Hartford
Fox, M., Geneva '60, Stamford
Fox, M. I., Cornell '53, Milford
Foye, G. J., Un. Coll. Dublin '65, Brookfield
Fraknoi, J., Pazmany Peter Univ. '34, Wallingford
Francis, H. L., Howard '48, Waterbury
Franco, J. E., Tufts '40, Hartford
Frank, H. D., Harvard '50, Bridgeport
Frank, L. M., Pennsylvania '45, West Hartford
Frank, R. D., U.C.L.A. '65, Greenwich
Frankel, S. A., Duke '46, New Haven
Franklin, D. N., Columbia '56, Wilton
Franklin, J. B., New Jersey '61, Hartford
Franklin, M., Maryland '56, Darien
Franz, A., II, Tufts '57, Meriden
Frechette, E. J., Jr., N. Y. Med. Coll. '47, New Haven
Fredericks, E. J., Cornell '62, Hartford
Frederickson, R. W., N. Y. Med. Coll. '51, Hartford
Freedman, J. K., Tufts '55, New Haven
Freedman, M., Tufts '32, New Haven
Freedman, M. E., N. Y. Med. Coll. '47, Hartford
Freehill, P. J., Chicago '65, New Haven
Freeman, D., Yale '24, New Haven
Freeman, J. J., Temple '33, Storrs (Windham County)
Frenkel, H. H., Boston '52, Bridgeport
Freymann, J. G., Harvard '46, Hartford
Friedberg, I. H., Tufts '37, Newington
Friedman, C. R., Cornell '46, New Haven
Friedman, I., Yale '33, New Haven
Friedman, N. H., Tufts '33, Stratford
Friedman, S. I., Tufts '68, Meriden
Friedmann, K. R., Hahnemann '57, Old Lyme
Friel, P. B., National '50, West Hartford
Friend, A. E., Queen's '22, Manchester
Friend, H. B., Queen's Univ. Canada '59, Hartford
Fritz, H. L., N. Y. Med. Coll. '57, Meriden
Fromm, S. M., Texas '48, Bridgeport
Frost, L. H., Vermont '13, Forestville
Fuhrmann, J. M., Long Island '43, Woodbridge
Fulchiero, E. A., Turin '40, New London
Fuldner, R. V., Columbia '33, New Haven
Fuoco, L. A., Buffalo '42, Noroton
Furniss, W. E., Tufts '40, Bristol
Futterman, H. A., St. Un. N.Y. '67, Hartford

Gabrielle, F. M., Jr., Bologna '64, West Hartford
Gacso, W. J., Tufts '62, Bridgeport
Gaffney, J. J., Loyola '30, Danbury
Gaffney, R. E., N. Y. Med. Coll. '52, Fairfield
Gagliardi, J. M., Jr., Jefferson '60, Derby
Gaines, G. A., Women's Med. Coll. '51, Waterbury
Gahm,, N. H., Tufts '61, Hartford
Gaito, R. A., Yale '58, New London
Gaintner, J. R., Johns Hopkins '62, Farmington
Galen, J. H., Long Island '42, Derby
Galinsky, D., Tufts '35, Hartford
Gallivan, J. N., Tufts '35, Wethersfield
Gallo, E. P., Jefferson '65, Winsted
Gallo, F., Jefferson '34, Winsted
Gallo, G. A., N. Y. Med. '63, Greenwich
Gallo, S. J., Maryland '57, Middletown
Galloway, J. A., Vanderbilt '62, Torrington
Gallup, J. W., Tufts '55, Sharon
Gambarini, A. J., Buenos-Aires '50, Hartford
Gammill, J. F., Columbia '48, Darien
Gandel, P. N., Tufts '64, Hartford
Gandy, R. A., Virginia '27, Stamford
Ganguli, P. C., Calcutta Un. '60, Middletown
Garb, A. E., St. Univ. New York '55, Cos Cob
Gardner, C. W., Jr., Chicago '48, Fairfield
Gardner, N. H., Tufts '34, East Hampton
Gardner, S. M., Colorado '32, Fairfield
Gargano, P. A., Loyola-Stritch '68, Bridgeport
Gariepy, J. A., Yale '54, Bridgeport
Garofalo, G. A., Louvain '58, Bridgeport
Garofalo, M. L., Naples '35, East Haven
Garrell, M., Vermont '52, Fairfield
Garrity, J. D., Georgetown '57, Monroe
Gates, W. L., Syracuse '44, Wallingford
Gaudio, A. R., Yale '63, Hartford,
Gaynes, P. M., St. Univ. New York '63, Fairfield
Geanuracos, G. J., Long Island '44, Bridgeport
Geary, F. L., Georgetown '63, Hartford
Geary, W. J., Georgetown '64, Hartford
Gedeon, P. E., Beirut '45, Waterbury
Geer, E. T., Temple '44, Stamford
Geetter, A. L., Pennsylvania '61, Hartford
Geetter, D. M., Jefferson '59, Hartford
Geetter, I. S., Jefferson '29, Hartford
Geiser, F. M., Cincinnati '41, Middletown
Gencarrelli, A. F., Buffalo '39, Branford
Genovese, F. T., N. Y. U. '29, Danbury
Gens, J. P., Yale '37, Norwalk
Gentile, A. L., Boston '29, New Haven
Genvert, H., Yale '36, Norwalk
Geoghegan, J. W., New York Med. Coll. '50, New Britain
Georgakis, N. G., N. Y. Med. Coll. '58, Norwalk
George, A. B., Athens '54, Hartford
Gerber, E., Jr., N. Y. Med. Coll. '51, Naugatuck
Gerber, J. S. Heidelberg '65, Hartford
Gerber, W. H., Heidelberg '65, West Hartford
Gerent, W. P., Hahnemann '47, West Hartford
Gerity, P. J., South Carolina '46, New London
German, J. N., Yale '62, New London
German, W. J., Harvard '26, New Haven
Gerow, G. H., Toronto '24, Westport
Gerster, J. W., Columbia '44, Greenwich
Gerz, H. O., Dusseldorf '53, Middletown
Gettings, J. A., Jefferson '16, New Haven
Gevalt, F. C., Jr., Columbia '40, Sharon
Gfeller, R. J., Georgetown '58, Thompsonville
Ghabrial, S. L., Ein-Shams Un. '53, Manchester
Ghaussy, A. A., Hamburg '62, Middletown
Ghofrany, F. N., Pahlavi Un. '65, Hamden
Ghofrany, S., Yale '72, Hamden
Gianfranceschi, G. R., McGill '48, Danbury
Giangrasso, A. E., Creighton '58, Trumbull
Giardi, L. P., Vermont '48, Hartford

Giardina, D. D., N. Y. Med. Coll. '50, Norwalk
Giarnella, E., Modena '53, Hartford
Gibbons, J. M., Jr., Georgetown '58, Hartford
Gibson, F., McGill '41, New Haven
Gibson, F. D., Syracuse '35, Hartford
Gibson, L. W., Tufts '62, Willimantic
Giddings, J. C., Vermont '43, Meriden
Giertz, W. E., Georgetown '50, New Britain
Gilbert, R. K., Cambridge '54, Waterbury
Gildea, M. A., Buffalo '24, Bridgeport
Giles, N. W., Vermont '21, Stamford
Gilgore, S. G., Jefferson '56, Darien (New London County)
Giligian, J., State Univ. N. Y. '53, Hartford
Gill, A. J., N. Y. S. U. '62, Bridgeport
Gill, N. P. Georgetown '52, Bridgeport
Gillcash, R. S., Yale '61, Willimantic
Gilliam, M. A., Oklahoma '68, Hamden
Gilman, J. I., Yale '60, Denver, Colorado (New Haven County)
Gilman, R. L., Harvard '29, Storrs (Windham County)
Giobbe, M. E. Tufts '29, Torrington
Giosa, N. A., Boston '52, Wethersfield
Gipstein, E., Jefferson '31, New London
Giuliano, L. A., Tufts '32, Norwalk
Giuliano, S., Tufts '30, Hartford
Given, J. B., Cornell '50, Hartford
Glaser, G. H., Columbia '43, New Haven
Glaser, W., Tufts '38, New Haven
Glass, H. L., Vanderbilt '49, Bristol
Glass, M. K., Harvard '55 Bridgeport
Glass, W. I., Cornell '38, Bridgeport
Glasser, M., New York St. Univ. '61, Willimantic
Glasser, S. T., McGill '28, Niantic
Glassman, H. H., Indiana '56, Hartford
Glassman, I., N. Y. Med. Coll. '51, New Haven
Glaubman, H. M., Yale '27, Hartford
Glazer, M., Tulane '22, New Haven
Glenn, J. S., Cornell '65, Torrington
Glenn, W. W. L., Jefferson '38, New Haven
Glenney, C. C., Tufts '52, Norwich
Glickman, M. G., Washington Un. '63, New Haven
Glike, F. P., Yale '41, Meriden
Gloetzner, H. J., Temple '41, Norwalk
Glucksman, M. L., Washington '59, Danbury
Glueck, B. C., Harvard '38, Hartford
Glugover, D. B., Chicago '62, Willimantic
Godar, T. J., Tufts' 56, Hartford
Godfried, M. S., Yale '36, New Haven
Godlash, K. M., Georgetown '61, Bloomfield
Godley, J. A., Yale '62, Orange
Goehausen, M. C., St. Louis '47, Westport
Goerner, J. R., Yale '43, Watertown
Goetcheus, J. S., Western Reserve '64, Essex
Goetsch, J. B., Rochester '38, New Haven
Goff, C. W., Illinois '24, West Hartford
Goffinet, S. B., Johns Hopkins '60, Woodbridge
Gofstein, R. M., Yale '51, Stamford
Golbey, R. B., N. Y. U. '49, Stamford
Gold, B., State Univ. New York '57, Hartford
Gold, H., Lausanne '60, Hartford
Gold, H. C., Zurich '53, Newington
Gold, L., Vienna '36, Stamford
Gold, L. H., N. Y. Med. '32, Hartford
Goldberg, A. H., Royal Coll. Surgeons '60, Georgetown
Goldberg, I. S., Creighton '33, Torrington
Goldberg, M. H., Albany '61, Hartford
Goldberg, M. M., Ottawa '54. Danbury
Goldberg, P. A., New York Med. Coll. '67, Stamford
Goldblatt, P. B., Pennsylvania '65, New Haven
Golden, A. J., Yale '50, Wethersfield
Goldenberg, A., Boston '54, Hartford
Goldenberg, I. S., Boston '51, New Haven
Goldenberg, J. J., Dalhousie '26, Hartford
Goldenberg, P. T., Boston '46, Hartford
Goldenring, H., N. Y. U. '49, Branford
Goldenthal, C., Yale '44, Hartford
Goldenthal, S., Yale '51, New Haven
Goldfarb, J., Texas '50, Stamford
Goldfarb, S. L., Milan '38, Stamford
Goldman, A., Zurich '53, Danbury
Goldman, G., Yale '10, Woodmont
Goldman, P. H., Geneva '57, Hartford
Goldstein, J., Med. Acad. Lodz '48, New Haven
Goldstein, M. R., Hahnemann '43, Hartford
Goldstein, P. S., Yale '49, New Haven
Goldstein, W. B., Washington '61, Danbury
Goldys, F. M., Tufts '26, Danbury
Golia, U. V., Long Island '45, New Haven
Golkar-Sisani, F., Teheran '65, Manchester
Golino, E. F., Rochester, '36, East Hartford
Golston, H., Med. Coll. of Virginia '26, Hartford
Golub, G. R., Tufts '60, Hartford
Good, P. S., Yale '45, Waterbury
Good, R. C., Columbia '42, Waterbury
Goodhue, P. A., Vermont '58, Stamford
Goodman, A. H., State Univ. N. Y. '57, New Haven
Goodman, J. L., Ottawa '60, Meriden
Goodman, S. E., Cornell '53, Norwalk
Goodrich, A., Indiana '41, Bridgeport
Goodrich, I., Med. Coll. Georgia '64, New Haven
Goodrich, W. J., Albany '39, Bridgeport
Goodyer, A. V. N., Yale '42, New Haven
Gordon, B. D., Maryland '51, Bridgeport
Gordon, E., Vienna '35, Middletown
Gordon, I. B., St. Un. N.Y. '63, New Canaan
Gordon, M. E., Yale '46, New Haven
Gordon, R. S., Columbia '46, New Haven
Gordon, Y., Tufts '48, West Hartford
Gorham, G. V., Michigan '30, Norwalk
Gorin, M., Rochester '60, Middletown
Gorman, A. T., Albany '57, Hartford
Gorman, D. J., Georgetown '62, Hartford
Goss, J. D., Jr., Southern California '49, Kent
Goss, K. G., Rochester '52, Charlestown, South Carolina (Fairfield County)
Gosselin, A. G., Tufts '53, Jewett City
Gossling, H. R., Temple '47, Hartford
Gott, P., Tulane '62, Lakeville
Gottlieb, F. I., Johns Hopkins '62, New Haven
Gottlieb, M. B., N. Y. U. '64, Meriden
Gould, M. M., Tufts '31, Hartford
Gourlie, H. W., Harvard '31, Thompsonville
Goyette, R. P., Georgetown '61, North Grosvenordale
Grace, T. W., Georgetown '63, Hartford
Graffagnino, P. N., Tulane '51, West Hartford
Graham, A. J., Tufts '60, Orange
Graham, R. A., Univ. Coll., Dublin '55 Mystic
Gram, P. B., Rochester '52, Manchester
Grann, V. R., N. Y. Med. Coll. '62, Stamford
Granoff, M. A., Chicago '37, New Haven
Grant, J. M., Columbia '49, Westport
Grant, R. F., Albany '38, Cromwell
Granville, N. B., State Univ. N. Y. '52, Windsor
Gratz, C. M., Toronto '23, Port Washington, New York (Fairfield County)
Gray, C. H., Stanford '48, Old Greenwich
Gray, P. H., Columbia '62, Stamford
Gray, P., Tulane '37, Portland

Graydon, R. J., II, Albany '62, Hartford
Grayer, D. I., Albert Einstein '64, Bridgeport
Grayson, D. R., New Jersey '63, Hartford
Green, R. H., Johns Hopkins '38, Madison
Greenberg, A., Long Island '32, Old Saybrook
Greenberg, A. D., Rochester '60, New Haven
Greenblatt, H. J., Vermont '36, New Britain
Greene, G. S., Harvard '39, Hartford
Greene, L. A., Boston '60, Norwich
Greene, N. M., Columbia '46, New Haven
Greene, P. J., Nat'l Un. Ireland '59, Manchester (Tolland County)
Greenfield, M., N. Y. U. '50, Danbury
Greenhouse, B., Yale '21, New Haven
Greenhouse, H. R., N. Y. Med. Coll. '44, Hamden
Greenspan, R. H., Syracuse '48, New Haven
Greenwald, W. F., Johns Hopkins '50, New Haven
Greiner, G. F., Vanderbilt '40, Kent
Grendon, D. A., Harvard '28, Sharon
Grey, N. J., S. U. N. Y. '64, Hartford
Griffin, D. P., Jefferson '14, Bridgeport
Griffin, J. E. C., Dublin '55, Norwich
Griffith, J. J., St. Un. New York-Downstate '52, Norwalk
Grigas, J. E., Tufts '36, Basking Ridge, New Jersey (Fairfield County)
Griffiths, H. L., Guy's Hosp. '53, Stamford
Grillo, W., Rochester '38, Willimantic
Grinsell, H. J., Tufts '54, Danielson
Griswold, D. M., Boston '65, Willimantic
Griswold, E. M., Yale '32, Glastonbury
Griswold, M., Yale '25, Old Lyme
Griswold, M. T., Tufts '05, Torrington
Gritzmacher, R. O., Wisconsin '63, Old Saybrook
Groark, J. A., Yale '24, New Haven
Grody, M. H., Pennsylvania '46, Hartford
Gromults, J. M., Jr., New York Univ. '58, Stamford
Gross, E. M., N. Y. U. '59, Hartford
Gross, N. D., Creighton '49, Hartford
Grossman, B. A., Georgetown '59, Norwalk
Grossman, E. T., Albert Einstein '63, Fairfield
Grossman, J. H., Rochester '41, Bridgeport
Grossman, R. S., St. Louis '52, Newtown
Grote, M. I., Chicago '66, Milford
Gruskay, F. L., Yale '54, Milford
Gryboski, W. A., Yale '56, New Britain
Gryce, W. I., N. Y. Med. Coll. '44, Danbury
Grycz, H. J., St. Andrews '59, Cheshire
Gualtieri, M. V., Tufts '43, Waterbury
Guardino, J. J., Vermont '62, Manchester
Gudernatch, G. S., Cornell '39, Sharon
Guida, F. P., Yale '34, New Haven
Guigui, A., Univ. Paris '53, Ridgefield
Guinan, D. A., Vermont '48, Manchester
Gulash, J. R., Marquette '40, Bridgeport
Gulliver, A. G., Jr., New York Med. Coll. '59, Torrington
Gundersen, C. A., Boston '63, Glastonbury
Gura, G. M., Loyola '31, Southington
Gurwitt, A. R., Yale '57, New Haven
Gurwitz, J., Tufts '38, Hartford
Guss, L., Oklahoma '41, Norwich
Gustafson, W. E., Yale '49, East Hartford
Gutierrez, T. G., Univ. Philippines '58, Meriden (Hartford County)
Gutkowski, T. J., Albany '64, South Windsor
Guttenberg, I., Yale '60, Meriden
Guttman, T., Prague '39, Bridgeport
Guzman, P. S., Philippines '61, Wallingford

Haber, M., N. Y. Med '63, Rockville
Haberlin, C. E., Med. Coll. Va., '24, Stratford
Habib, N. I., Univ. of Cairo '55, Derby
Hackbarth, C. J., Louvain '64, Old Lyme
Haddad, F. M., Yale '43, Ansonia
Hagedorn, M. E., Jefferson '45, New Britain
Haghighat, A., Univ. Tehran '55, Bridgeport
Haine, J. W., Albany '43, Stamford
Haines, H. L., Johns Hopkins '39, New London
Haines, R. W., Jefferson '46, West Hartford
Haksteen, J. J., Georgetown '58, Hartford
Hale, V. A., Texas '22, Sarasota, Florida (New London County)
Haley, J. C., Yale' 40, Hamden
Hall, M. I., Edinburgh '34, Bristol
Hall, M. N., Albany '48, Niantic
Hall, W. A., Harvard '56, Middletown
Hall, W. C., Pennsylvania '30, West Hartford
Hall, W. E., Yale '25, Meriden
Halligan, T. J., Jr., Vermont '63, Hartford
Halloran, J. V., Boston Univ. '36, Stratford
Hamaty, D., Hahnemann '53, New Haven
Hamblin, W. C., State Univ. N. Y. '52, Windsor
Hambly, R. G., Utah '69, Hamden
Hamilton, C. R., Jr., Jefferson '49, Manchester
Hamilton, G. L., Jr., Tufts '44, Hartford
Hamilton, T. S., Wayne '39, Hartford
Hamlin, C. H., Harvard '41, Hartford
Hammond, G. L., McGill '62, New Haven
Hampton, W. H., Syracuse '54, Greenwich
Hampton, W. R., State Univ. New York '59, Simsbury
Handler, S. L., Louisville '51, New Haven
Hands, R. A., Jr., Cornell '68, Greenwich
Haney, J. F. B., Yale '64, Storrs (Windham County)
Hankin, E., Columbia P. & S. '62, Fairfield
Hankin, M. A., Long Island '33, New Haven
Hanley, H. C., Toronto '63, Stratford
Hanley, J. B., Jefferson '39, Bristol
Hannan, W. S., Harvard '45, Hartford
Hansen, C. E., Cordoba's Nat'l. Un. '60, Stamford
Hansen, T. W., Harvard '60, New Haven
Hansen, W. H., N. Y. Med. Coll. '46, Shelton
Happel, E., Washington Univ. '49, New Milford
Hardenbergh, D. B., Harvard '34, Southport
Hardy, J. H., Columbia '58, Hartford
Hardy, R. E., Cornell '57, Greenwich
Hare, E. T., Jr., Vermont '58, Milford
Harkins, J. A., N. Y. Med. Coll. '52, Norwichtown
Harkins, R. W., St. Louis '61, Woodbury
Harness, J. H., National Un. Ireland '54, Darien
Harrell, S. R., Emory '66, Darien
Harris, A. L., Long Island '14, Essex
Harris, B. R., Yale '22, West Haven
Harris, H. P., Jr., Duke '36, Fairfield
Harris, L. D., Tufts '34, Hartford
Harris, R. L., N. Y. U. '59, West Hartford
Harrison, A. M., N. Y. Med. Coll. '51, Stamford
Harrison, E. R., Yale '26, New Haven
Harrison, M., Jefferson '29, Naples, Florida (New London County)
Harrop, J. S., Jefferson '61, Avon
Harshbarger, I. L., Virginia '22, Bridgeport
Harshbarger, J. E., Pennsylvania '55, Bridgeport
Hart, H. H., McGill '22, Southbury
Hart, J. C., Yale '30, Hartford (New Haven County)
Hart, R. W., Cornell '45, Hamden
Hart, W. E., Jefferson '49, Hartford

Hartman, F. B., Harvard '34, New London
Harton, M. R., Tufts '60, Danielson
Harty, J. E., Georgetown '37, Waterbury
Harvard, B. M., Jr., Tulane '39, New Haven
Harvey, C. C., Cornell '16, Middletown
Harvey, E. R. Jr., Yale '41, Seymour
Harvey, R. B., Cornell '45, New Haven
Harvey, S. W., Cornell '46, Middletown
Harwin, S. M., New York '61, New Britain
Harwood, C. W., Vermont '40, Middletown
Harwood, R. A., N. Y. Med. Coll. '62, Brookfield
Haskins, D. M., Harvard '47, Greenwich
Hassan, K. A., Alexandria '52, Stamford
Hasson, J., St. Un. New York '51, Hartford
Hastings, D. S., Boston '53, Stafford Springs
Hastings, L. P., Vermont '23, Hartford
Hau, K. H., Wuhan '56, Bridgeport
Haugh, J. D., N. Y. U. '52, Hartford
Hauss, D. S., Western Reserve '48, Hartford
Havlicek, J. A., Queen's '63, Higganum
Hawkes, P. H. R., St. Bartholomew's Hospital '49, Waterbury (Hartford County)
Hawkins, J. H., Maryland '56, Bloomfield
Haxo, J. V., Yale '51, New Milford
Haydock, G. G., Harvard '45, Sharon
Hayes, D., Harvard '51, New London
Hayes, M. A., Michigan '40, New Haven
Hays, D. R., N. Y. U. '49, Washington
Hazen, D. R., Harvard '33, Hartford
Healey, W. V., Columbia '56, Greenwich
Healy, J. W., Tufts '55, Hartford
Healy, T. M., Columbia '41, Manchester
Heap, L. D., St. George's Hosp. Med. Sch. '58, Southington
Hebard, G. W., Cornell '36, New Canaan
Hecht, H. L., Albert Einstein '62, Stamford
Hecklau, E. F., N. Y. U. '54, Greenwich
Hedberg, D. L., McGill '60, Hartford
Hedley, G. E., Heidelberg Un. '67, Norwalk
Hehre, F. W., Columbia '47, New Haven
Heiger, A. A. Basel '59, Cheshire
Heimann, W. G., Bern '56, Manchester
Heinrich, W. D. Hahnemann '41, Torrington
Helfrick, F. W., Johns Hopkins '41, Manchester
Heller, W., State Univ. N. Y. '60, Bridgeport
Hellijas, C. S., Rochester '41, Wethersfield
Hellman, S., Syracuse '59, Boston, Mass. (New Haven County)
Helvie, H. E., Oklahoma '60, Waterbury
Hemley, S. D., N. Y. U. '47, Greenwich
Hendel, I., Jefferson '17, New London
Hendessi, H., Tehran '56, Manchester
Henken, E. M., Tufts '52, Hartford
Henkle, R. T., Cornell '31, New London
Hennessey, B. C., Dalhousie '64, Bristol
Hennessey, J. F., McGill '53, Meriden
Hennessey, J. G., Tufts '34, Bridgeport
Hennessy, J. J., Columbia '26, Hartford
Henry, P. D., McGill '52, Derby (Fairfield County)
Hensley, R. V., Univ. Texas '62, Hartford
Hepburn, R. H., Harvard '39, Hartford
Herbert, E. A., Cornell '49, Willimantic
Herbin, J. T., Zurich '66, Fairfield
Herbordt, W. A., Berlin '46, Derby
Herman, E. B., Berne '56, Norwalk
Herman, R. S., Jr., Buffalo '46, Manchester
Hermann, J. H., Copenhagen '59, Norwalk
Herr, H. H., Tufts '49, New Britain
Herrera, N. E., Santo Domingo '50, Danbury
Herrmann, A. E., Harvard '23, Waterbury
Hersey, T. F., Tufts '37, New Haven
Hershey, D. D., Albany '50, Bristol
Hershman, H. H., Western Ontario '41, Bristol
Hess, O. W., Buffalo '31, New Haven
Hessler, P. C., Yale '70, Danbury (Middlesex County)
Hetzel, J. L., Yale '26, Waterbury
Hewett, W. J., Un. Buffalo '61, Hartford
Hickcox, C. B., Tufts '38, Hartford
Hickmon, N., Meharry '59, Hartford
Hickox, D. B., Albany '62, Middletown
Hicks, G. W., St. Louis Un. '67, Stamford
Hicks, J. E., Tennessee '66, New Haven
Hicks, R. E., Munich '59, New Britain
Hiden, R. B., Virginia '23, New Canaan
Higgins, D. C., State Univ. N. Y. '55, New Haven
Higgins, H. W., Tufts '32, Norwich
Higgins, J. J., Georgetown '28, Enfield (New Haven County)
Higgins, K. E., Rochester '58, Fairfield
Hilding, D. A., Minnesota '54, Newark, New Jersey (New Haven County)
Hill, D. A., Yale '65, Hartford
Hill, J. M., Illinois '53, West Hartford
Hill, T. M., Maryland '66, Hartford
Hill, W. E., Jr., Temple '52, Naugatuck
Hillemeir, H., N. Y. Med. Coll. '51, Farmington
Hillis, W., Cornell '55, Greenwich
Hillman, M. M., Columbia '19, Hamden
Himelstein, M., Columbia '51, Hartford
Himelstein, S. C., St. Un. New York '65, Enfield
Himmelsbach, R. K., Georgetown '57, Simsbury
Hinchey, R. J., Tufts '21, Middlebury
Hines, A. H., Un. Pennsylvania '69, Danbury
Hines, T. F., Pittsburgh '42, Wallingford
Hinz, C. F., Jr., Western Reserve 51, Farmington
Hirschfeld, O. M., Tufts '31, Hartford
Hirschberg, M. S., Tufts '27, Bloomfield
Hobbie, R. J., Vermont '65, Fairfield
Hochberg, D. T., Johns Hopkins '62, Putnam
Hockmuth, L. N., Tufts '42, Hartford
Hodgkins, C. H., Hahnemann '36, New Haven
Hoffer, J. M., Tufts '46, Ansonia
Hoffman, H. B., Northwestern '61, Hartford
Hoffman, J. B., Columbia '43, Greenwich
Hoffman, L. I., Albert-Einstein '66, West Hartford
Hoffman, W. A., State Univ. '53, Fairfield
Hogan, A. F., N. Y. Med. Coll. '49, Putnam
Hogan, G. F., Yale '57, New Haven
Hogan, J. M., Univ. Coll. Dublin '56, Waterbury
Hogan, W. L., Vermont '18, West Hartford
Holden, J., Long Island '47, Derby
Holden, W. W., N. Y. U. '47, Bristol
Holdt, J. E. J., Duke '67, Simsbury
Hollander, J. S., St. Univ. New York '60, Enfield
Holley, M. R., Howard '61, New Haven
Hollister, J. M., Cornell '58, Groton
Holtz, R. S., Vermont '28, West Hartford
Homer, D. R., Vermont '60, Danbury
Homza, L. R., Creighton '58, Bridgeport
Hook, R., Municipal Univ. Amsterdam '61, New Haven
Hoovis, M. L., Lausanne '56, Barrington, Rhode Island (New Haven County)
Hope-Ross, P. E., Nat'l. Ireland '53, Bridgeport
Horan, A. H., Columbia '65, Westport
Horn, B., N. Y. U. '29, Bridgeport
Horning, B. G., Harvard '28, Malaga, Spain (Hartford County)
Horowitz, B. J., Pennsylvania '59, Hartford

Horowitz, I., Vienna '37, Bridgeport
Horowitz, J. L., N. Y. Med. Coll. '49, Bridgeport
Horrax, T. M., Temple '46, New Britain
Horrigan, T. H., N. Y. U. '49, Glastonbury
Horton, F. H., Yale '47, Manchester
Horton, W. H., Boston '40, Guilford
Horwitz, M., Harvard '49, Manchester
Hosking, W. F., Queens Univ. '61, West Hartford
Hostnik, W. J., Johns Hopkins '54, New London
Houck, J. H., Queens U. '49, Hartford
Hough, P. T., McGill '32, Nova Scotia, Canada (Hartford County)
Houle, R. T., Georgetown '32, South Windsor
Houlihan, J. J., N. Y. Med. Coll. '46, West Hartford
Houlihan, R. K., N. Y. Med. Coll. '54, New Haven
Hourihane, M. J., Nat'l. U. Ireland '61, West Haven
Howard, A. J., Yale '20, New Haven
Howard, H. A., Tufts '29, Wethersfield
Howard, L. K., Minnesota '29, Hartford
Howard, W. O., N. Y. U. '32, Orange, N. J. (New Haven County)
Howe, E. R., Columbia '46, Hartford
Howe, G. O., Colorado '50, West Hartford
Howlett, K. S., Vanderbilt '31, Southbury (Fairfield County)
Howorth, B. M., Washington '25, Greenwich
Hubbard, R. C., Cincinnati '46, Danbury
Huber, H. C., Temple '46, Waterbury
Hughes, C. T., Jr., Harvard '53, Hartford
Hughes, G. S., Indiana '44, Darien
Hughes, W. F., Jefferson '48, Westport
Hull, C., Queens '55, Hartford
Hulme, S. A., Pittsburgh '45, Hartford
Hunkemeier, E., N. Y. U. '33, Rowayton
Hunt, M. L., Tufts '51, Vernon
Hunter, P., Bern '55, Devon
Hurowitz, R. B., Basel '59. West Haven
Hurst, V. W., III, Yale '62, Woodbury (New Haven County)
Hurwit, A. C., Tufts '57, East Hartford
Hurwitz, G. H., Maryland '33, Hartford
Hurwitz, M. R., Albany '64, Hartford
Hurwitz, S., Long Island '49, New Haven
Hurzeler, M. A., Creighton '60, New Haven
Huss, G. R., Temple '49, Leonia, New Jersey (Fairfield County)
Husvet, F., Med. Sch. Univ. of Pecs. '51, Winsted
Huszar, R. J., N. Y. State '53, Hartford
Huvelle, C. H., N. Y. U. '43, Torrington
Hyland, F. J., Galway '54, Milford
Hyland, J., Nat'l. Un. Ireland '55, Hamden
Hyun, J., Seoul '52, Hartford

Iannotti, J. P., Naples '38, Plainville
Iger, H. G., State Univ. N. Y. '62, Hartford
Igersheimer, W. W., Tufts '44, Guilford
Ignace, S. J., Georgetown '30, New Milford
Ill, M. F., New York '55, Bristol
Immordino, P. A., Columbia '62, New London
Impellitteri, T. J., Marquette '48, Stratford
Imran, A. H., King Edw. Med. Coll. '67, East Hartford
Inder, H. A., McGill '51, Bridgeport
Inkster, J. H., Cornell '30, Keene, New Hampshire (Fairfield County)
Innes, J. W., Cornell '60, Greenwich
Iodice, M. T., Freiburg '64, Bridgeport
Ippolito, T. L., N. Y. Med. Coll. '38, East Norwalk
Ireland, E. F., Jr., Harvard '48, Bridgeport
Irving, W. D., N. Y. Med. Coll. '52, Old Saybrook
Irwin, H. H., Tufts '34, New London
Irwin, J. B., Long Island '48, Torrington
Isenman, R., Tufts '30, Westport
Izard, M. W., Physicians & Surgeons '59, Hartford
Izumi, E. M., Texas '50, Winsted
Izzo, P. A., Vermont '46, Stamford

Jack, J. L., Yale '23, North Haven
Jackson, A. H., Yale '24, Southbury
Jackson, D. L., Cornell '64, New London
Jackson, S. W., McGill '50, New Haven
Jacobson, C. E., Jr., Cornell '35, Manchester
Jacobson, H., Lausanne '62, New Haven
Jacobson, J. J., Iowa '63, New Britain
Jacuch, M., Ukraine '55, Hartford
Jaeger, C. A., Duke '50, Greenwich (New Haven County)
Jaiven, S. J., N. Y. U. '40, Stamford
James, L. P., Yale '27, Hartford
James, W. R., Yale '44, Essex
Jameson, M. E., Edinburgh '52, Danbury
Jameson, T. P., Edinburgh '52, Danbury
Jamshidi, A. Teheran '54, Bridgeport
Janet S. J., Zurich '56, Milford
January, D. A., Yale '34, Hartford
January, M. H., Yale '35, West Hartford
Janzen, A. H., Kansas '38, Hartford
Jarboe, E. J., Tennessee '60, New Britain
Jarvik, N. E., N. Y. U. '51, Stamford
Jee, K. S., Seoul Nat'l. '62, Norwalk
Jennes, M. L., Tufts '38, Waterbury
Jennings, W. F., Rush '37, Groton (Hartford County)
Jensen, G. O. F., New York '57. Bristol
Jensen, P. B., London Univ. '52, Greenwich
Jeresaty, R. M., Beirut '54, Hartford
Job, G. G., Univ. Philippines '59, West Haven
Johnson, C. W., Boston '45, Thompsonville
Johnson, D. P., Yale '64, Guilford
Johnson, D. W., Columbia '48, Hartford
Johnson, G. B., Jr., Boston '55, Bridgeport
Johnson, H. K., Jr., Jefferson '58, New London
Johnson, J. C., Jr., Vanderbilt '44, Hartford
Johnson, M. E., Wom. Med. Coll. Penn. '57, New London
Johnson, P., Tufts '32, Hartford
Johnson, S. A., Columbia '49, New Britain
Johnson, T. H., Columbia '59. New Britain
Johnson, W. H. N., Howard '39, Westport
Johnston, J. H., Long Island College '43, Wethersfield
Jonas, G. Q., N. Y. U. '50, Fairfield
Jonas, S. L., Un. Michigan '50, Wilton
Jones, C. R., New York Med. Coll. '62, Hamden
Jones, E. A., Temple '56 Essex (New London County)
Jones, E. E., Med. Coll. Virginia '52, Farmington
Jones, E. K., Columbia '34, Fairfield
Jones, J. F., Columbia '43, Danielson
Jones, M. B., N. Y. U. '41, Norwalk
Jones, R. F. III, Virginia '61, Hartford
Jones, W. N., Rochester '50, New London
Jordan, R. H., Virginia '33, New Haven
Josel, M., Chicago '52, Hartford
Joseph, J. L., Port-au-Prince '54, Norwich
Joseph, L. G., Jefferson '39, New Haven
Josephson, N. D., Yale '45, Rockville
Joslin, S. L., Yale '43, Fairfield
Jovell, J. W., Tufts '39, Danbury
Joy, R. C., McGill '51, Danbury
Judd, B. C., Yale '63, New Britain
Jung R., Toronto '37, Woodbridge
Jung, R. M., Tufts '62, New London

Kablotsky, Y. H., Tufts '67, Plantsville
Kadish, J. A., Queen's '60, Norwich

Kadish, M. E., Geneva '5, Norwich
Kaess, K. R., Harvard '44, Waterbury
Kaetz, H. W., Tufts '40, New Haven
Kahaner, H. A., Tufts '63, Manchester
Kahn, D., State Univ. N. Y. '53, Meriden
Kaiser, J. S., Columbia P. & S., '51, Storrs (Windham County)
Kalaman, F. J., Georgetown '41, Norwalk
Kalams, Z. S., Athens '53, Norwich
Kalett, J., Jefferson '28, Sarasota, Florida (Hartford County)
Kalin, J. I., Harvard '24, Hartford
Kallfelz, A., New York '55, Hartford
Kallick, C. J., Jefferson '58, Westport
Kamens, E. A., Vermont '51, Bridgeport
Kaminsky, D. M., N. Y. U. '63, Orange
Kang, J. H. C., Yonsei Un. '65, Hartford
Kanter, D. M., Long Island Coll. of Med. '49, Stamford
Kaplan, B. J., Vermont '49, Hartford
Kaplan, D. H., N. Y. Med. '55, New London
Kaplan, E. D., Zurich '56, Fitchburg, Mass. (Fairfield County)
Kaplan, H., N. Y. Med. Coll. '44, New Britain
Kaplan, H. P., Yale '63, Meriden
Kaplan, L., Baylor '36, Bridgeport
Kapp, P. A., S. U. N Y. '56, Fairfield
Karadi, B. S., Seth G. S. '62, Woodbridge
Karas, L. M., Tufts '57, Stamford
Kardos, J. A., Jefferson '51, Stamford
Karjoo, R., Pahlavi '62, Norwich
Karlovsky, E. D., Albany '46, Orange
Karno, M. L., Tufts '55, New London
Karns, R. E., Jefferson '50, Manchester
Karpe, R., Prague '24, Hartford
Karsh, J. A., Beirut '46, Waterbury
Kaschmann, J., Munich '22, West Hartford
Kashgarian, M., Yale '58, New Haven
Kasper, R. F., Georgetown '58, Bridgeport
Kass, M. A., Northwestern '66, New Haven
Kassim, S. E., Baghdad '47, Trumbull
Katis, J. G., McGill Un. '60, New Canaan
Katis, L. U., Saskatchewan '57, Ridgefield
Katz, A. J., Pennsylvania '62, Farmington
Katz, D., Vermont '25, Willimantic (Hartford County)
Katz, H., Harvard '21, Hartford
Katz, I., N. Y. Med. Coll. '37, Meriden
Katz, J., Harvard '49, New Haven
Katz, M. E., Oklahoma '41, Norwich
Katz, S. R., N.Y.U., '64, Fairfield
Katzenstein, R. E., Berne '38, Cheshire (Middlesex County)
Katzin, B., Johns Hopkins '43, Torrington
Kauders, J. T., Jefferson '62, Bridgeport
Kauer, G. L., Jr., Cornell '37, Greenwich
Kaufman, M., Johns Hopkins '43, Fairfield
Kaufman, W., Michigan '38, Bridgeport
Kaufmann, H. A., Michigan '54, Middletown
Kaunitz, P. E., N. Y. U. '38, Westport
Kavirajan, V., Madras, India '66, New Milford
Kavookjian, H., Jr., Beirut '50, Darien
Kawceki, W., National Univ. '55, New Britain
Kay, C. J., S U N Y '60, Bridgeport
Kay, F., Boston '58, Hamden
Kay, R., Temple '45, Hartford
Kayal, F. A., New Jersey Coll. Med. '69, Brookfield
Kaye, R. H., Johns Hopkins '65, Norwalk
Kazanjian, N. A., Hahnemann '45, New Haven
Kearney, M. W., Jr., Harvard '40, Hartford
Keating, S. J., Jr., Georgetown '62, Simsbury
Keddy, R. A., McGill '24 Stamford
Keefe, A. D., N. Y. Med. Coll. '52, East Hartford
Keefe, R. B., Maryland '54, Windsor
Keefe, R. S., Boston '25, Wethersfield
Keefe, W. P., Maryland '55, Hartford
Keegan, J. T., Maryland '55, Milford
Keelan, E. M., Univ. Coll. Dublin '54, Westport
Keeney, R. R., Jr., Tufts '34, Manchester
Keet, J. E., Long Island '47, Waterbury (Hartford County)
Keggi, K. J., Yale '59, Waterbury
Keleman, E., Budapest '25, South Laguna, Calif. (Fairfield County)
Kelleher, J. H., Vermont '42, Norwich
Kelleher, M. J., N. Y. Med. Coll. '60, Bridgeport
Keller, F., Long Island '43, Woodbridge
Keller, L., Tufts '26, Stamford
Keller, N. W., Cornell '54, Greenwich
Kelley, W. O., Johns Hopkins '37, Norwich
Kellman, I. A., S. U. N. Y. 66, Sharon
Kelly, C. C., Johns Hopkins '14, Hartford
Kelly, D. R. Albany '64, Hartford
Kelly, G. P., N.Y.U. '69, Fairfield
Kelly, J. C., Queen's '28, Riverside
Kelly, J. F., Tufts '50, Middletown
Kemler, R. L., Yale '43, Hartford
Kemp, E. P., Tufts '25, Fairfield
Kemp, W. W., Harvard '39, Stamford
Kenigsberg, N., Yale '39, Bridgeport
Kennedy, G. L., Tufts '50, Jewett City (Windham County)
Kennedy, J. J., Jr., Boston '46, Windsor Locks
Kenney, J. D., Boston '56, New Haven
Kenny, W. J., Dublin '60, Hartford
Kent, E. H., N. Y. U. '43, Greenwich
Kenter, A. M., Ankara '51, Danbury
Keogh, R. J., Georgetown '57, Stratford
Keohane, M. F., Dublin '52, West Haven
Kerin, R., Yale '47, Milford
Kerr, R. J. N., Trinity Coll. Dublin '56, Clinton
Kerrigan, R., New York '62, Norwich
Kerstein, M. D., Chicago '63, West Haven
Kertesz, J., Vienna '24, Hamden
Kessel, L., Vienna '34, Rocky Hill
Kessler, F., Vienna '37, New Haven
Kessler, W., Rochester '58, Westport
Keys, R. C., Kansas '27, Winchester, Kansas (Fairfield County)
Khan, K., King Edward Med. Coll. '50, Newington
Khoury, A. E., Georgetown '60, Danielson
Khu, E. G., Sto. Tomas '63, New Haven
Kiley, R. F., Yale '53, Hartford
Kilga, L. A., Un. Heidelberg 66, Middletown
Kilgus, J. F., Maryland '31, Hartford (Litchfield County)
Kilhenny, C., N. Y. Med. '57, Danbury
Kim, C. A., Kyungpook Un. Korea '58, New London
Kim, C. K., Boston '63, Manchester
Kim, K., Seoul '52, New Haven
Kim, Y. H., Seoul Nat'l. Un. '61, Easton
King, E. J., London Hosp. '43, Bethel
King, R. P., N. Y. Med. Coll. '57, New Haven
King, S. A., Columbia '47, Stamford
Kingston, P. J., N. Y. Med. Coll. '50, Hartford
Kinstlinger, R., Rochester '60, West Haven
Kirchner, J. A., Virginia '40, New Haven
Kirsch, N., Long Island '40, Hartford
Kiss, G. T., Cornell 51, Fairfield
Kitahata, L. M., Tokyo Imperial Univ. '47, New Haven
Klare, R. E., Columbia '53, East Woodstock
Klatskin, G., Cornell '33, New Haven

Klatsky, A. U., George Washington '59, Hartford
Kleeman, J. A., Yale '46, Bethany
Klein, B., N. Y. Med. Coll. '52, South Meriden
Klein, H. T., Illinois '40, Stamford
Klein, J., Long Island '34, Hartford
Klein, J. J., St. Univ. New York '57, Norwalk
Klein, N. C., Cornell '60, Stamford
Kleinman, H. L., Buffalo '41, Bridgeport
Kligerman, S., Illinois '39, Hartford
Klimas, F. A., Vermont '54, Shelton
Klimek, R. J., S. U. N. Y. '66, New London
Klipstein, A., N. Y. U. '65, Manchester
Klipstein, E. A., N. Y. U. '65, Manchester
Klumpp, T. G., Harvard '28, New York City (New Haven County)
Knapp, R. B., New York '59, Greenwich
Knauff, E. F., New York '54, Easton
Kneale, H. B., Johns Hopkins '20, Fairfield
Knight, H. F. Rochester '49, Hartford
Knights, W., Vermont '60, East Hartford
Knirsch, A. K., Western Ontario '62, Waterford
Knowlton, A. H., Albany '66, New Haven
Knox, A. E. H., Nebraska '47, Bloomfield
Knox, K. R., Jefferson '46, Hartford
Koch, L. W., New York '63, New Britain
Koehler, P. B., Yale '48, Norwalk
Koenig, A. R., North Carolina '58, Cos Cob
Koff, A. M., Columbia '57, Avon
Koff, M. S., Hahnemann '63, Hartford
Koffler, A., Jefferson '34, Stamford
Kogut, H. V., N. Y. Med. Coll. '43, Bridgeport
Kohorn, E. I., Cambridge & Un. Coll. Hosp. London '52, New Haven
Koleshko, L. J., Maryland '42, Waterbury
Kondo, K., Keio Un. Tokyo '63, Orange
Koops, H. J., Harvard '66, New Britain
Kopeloff, N., Albert Einstein '66, Greenwich
Korab, J. J., Tufts '43, Higganum
Korn, F. E., N. Y. Med. Coll. '50, Middletown
Kornblut, A., N. Y. U. '20, Bridgeport
Kosar, W. P., Columbia '46, Hartford
Kostecki, R. J., N. Y. U. '61, Waterbury
Kosto, B., Yale '62, Hartford
Kotch, P. I., Tufts '60, Newtown
Kott, J. H., N. Y. U '33, Harwinton
Koufman, W. B., Tufts '35, New Haven
Kra, S. J., Lausanne '60, New Haven
Krall, I. H., Long Island '37, Hartford
Kramer, B., Maryland '56, Wallingford
Kramer, F. M., Lausanne '54, Cheshire
Kramer, R. A., Yale '55, Hartford
Kramer, R. T., Wayne '56, Torrington
Kramer, T., N. Y. Med. Coll. '62. Norwalk
Kramm, W. A., Albany '51, Niantic
Krasnogor, L. J., N. Y. U. '63, Stamford
Krassner, L. S., Boston '56, New Haven
Kraus, G. Long Island '44, Greenwich
Kraus, P. A., Dartmouth & McGill '66, Waterbury
Kraut, H. L., Harvard '53, Stamford
Krauthamer, M. J., St. Univ. New York '62, Darien
Krc, E. Czechoslovakia '52, Wallingford
Kreis, D. J., Tufts '47, New Haven
Kremer, C. P., Jr., Virginia '53, Darien
Kresge, D. J., Temple '53, Avon
Krieger, J. L., Long Island '49, Hartford
Krinsky, C. M., Tufts '33, New London
Kristan, J. J., Johns Hopkins '45, Rockville
Kriz, J. J., Virginia '61, Rockville
Krizek, T. J., Marquette '57, New Haven
Krochmal, H., Vienna '37, Meriden
Kropp, P. J., Cologne '48, Norwich
Krosnick, G., Jefferson '38, New Haven
Krosnick, M. Y., Yale '30, New Haven
Krupp, A. F., N. Y. Med. Coll. '62, Manchester
Kuczko, E. P., N. Y. U. '52, Danbury
Kueffner, W. R., Minnesota '43, Southport
Kuehn, P. G., Rochester '52, Hartford
Kugelman, T. P., Yale '60, Hartford
Kuhn, H. R., Texas '52, New London
Kulkarni, V. V., Seth G. S. Med. Coll. '61, Woodbridge
Kummer, A. J., Harvard '39, New Haven
Kummer, S. I., Hahnemann '49, Rockville
Kunkel, F. E., Yale '26, West Hartford
Kunkel, P., Washington '34, Danbury (New Haven County)
Kurien, V. A., Edinburgh, Scotland '63, Manchester
Kurland, M. D., Harvard '60, West Hartford
Kushlan, S. D., Yale '35, New Haven
Kyle, G. B., Long Island '38, Sandy Hook
Laakso, A. O., Cornell '37 Danielson
Laakso, W. B., Tufts '61, Hartford
La Bella, L. O., Columbia '25, Middletown
Labraico, J. M., Jefferson '58, Bristol
LaBrecque, F. C., Tufts '35, Waterbury
Labriola, G., Jefferson '57, Naugatuck
LaCamera, R. G., Cincinnati '49, New Haven
Lacava, J. J., Georgetown '34, New Britain
Lach, F. E., Maryland '41, New Haven
LaCorte, S., N. Y. Med. Coll. '30, Stamford
LaFemina, N. F., Long Island '25, Hamden
Laffaye, H. A., Buenos Aires '61, Westport
LaForte, P., N. Y. U. '50, Stamford
Lahey, W. J., Harvard '42, Hartford
Lahiri, B., Univ. Calcutta '60, Hartford
Lahvis, W. F., St. Univ. N. Y. '56, New Milford
Lakin, P. C., Colorado '64, New Britain
LaMastra, P. M., Maryland '60, Bridgeport
Lambe, M. J., Queen Univ. Belfast '63, Middletown
Lambe, T. P., Queens Univ. '61, Middletown
Landau, S. J., Yale '55, New Haven
Landow, S. S., Un. Heidelberg '66, Branford (Middlesex County)
Landry, A. B., Sr., Jefferson '09, West Hartford
Landry, A. B., Jr., Jefferson '56, Hartford
Landry, B. B., Harvard '20, West Hartford
Landwirth, J., S. U. N. Y. '61, Bridgeport
Langan, M. J., Columbia '46, Greenwich
Langenauer, B. J., Albert Einstein '64, Hamden
Langhammer, H., Heidelberg '55, Norwich
Langmann, R. D., Physicians & Surgeons '55, Hartford
Langner, H. P., Yale '22, Milford
Langner, J. M., Un. Zurich '53, Southington (New Haven County)
Laning, G. M., Michigan '10, Thompsonville (Litchfield County)
Lanzi, R. A., Temple '61, Orange
Lapenta, R. G., George Washington '37, Hartford
LaPierre, A. R., Columbia '38, Norwich
LaPierre, W. W., Columbia '39, Norwich
Lapinski, L. S., Yale '50, Bridgeport
Laplume, A. A., Montreal '24, Tamarac, Ft. Lauderdale, Florida (Hartford County)
LaPorte, T. F. V., Boston '33, Bristol
Larkin, C. L., Jr., Columbia '46, Waterbury
Larkin, J. C., Johns Hopkins '35, New Britain
Larkin, J. I., Albany '57, Greenwich
Larkin, J. T., Georgetown '30, Hampton
Larson, A. L., Albany '36, Hartford

Lashgari, M., Tehran '62, Hartford
Lattanzi, W. E., Yale '55, New Haven
Laubstein, M. B., S. U. N. Y. '56, Derby
Laudano, A. J., Tufts '47, New Haven
Lavergne, B. M., Laval '55, Old Saybrook (New London County)
Lavietes, P. H., Yale '30, New Haven
Lavietes, S. R., Baylor '49, New Haven
Lavorgna, M. H., St. Louis '40, New Haven
Lawlor, E. F., N. Y. Med. Coll. '59, New Britain
Lawrence, G. J., New York Med. Coll. '63, Willimantic
Lawrence, J. J., Howard '57, Bridgeport
Lawson, I. R., Aberdeen Un., Scotland '54, Hartford
Lawson, J. P., Manchester, England '55, Derby
Leach, C. N., Jr., Columbia '60, Farmington
Lear, H. A., St. Louis '43, New York, New York (Hartford County)
Lear, M., Yale '11, New Haven
Leavy, S. A., Rochester '40, New Haven
Lebhar, N. F., Columbia '39, Westport
Lebowitz, A. I., Hahnemann '66, Stamford
Lebowitz, W. B., Boston '56, Bridgeport
Lee, J. F., Cornell '46, Greenwich
Lee, J. P., Nat'l. Defense Med. Ctr. '64, Middletown
Lee, J. R. Queen's '24, Southbury
Lee, K. J., Columbia '65, New Haven
Lee, M. A., Louisville '66, Fairfield
Lee, N. H., Seoul Nat'l. Univ. '49, Bridgeport
Lee, W., Yale '41, Hartford
Lee, W. B., Yonsei Un. '60, Norwich
Leeds, W. G., Long Island College '48, West Hartford
Lehmann, W. B., Yale '63, Hartford
Lehmus, H. J., N. Y. U. '43, Manchester
Lehrman, J. C., Albert Einstein '66, Meriden
Leib, D. B., Yale '55, New London
Leib, G. M. P., Yale '55, New London
Leicach, J., Buenos Aires '56, Kensington
Leicach, M., Buenos Aires '53, Hartford
Leighton, R. L., N. Y. Med. Coll. '60, Fairfield
Lena, H. F., Jr., Cornell '45, New London
Lena, R. P., Tufts '57, New Haven
Lenci, T. D., Columbia '49, Fairfield
Lencz, E., Vienna '36, Miami Beach, Florida (New Haven County)
Lenehan, J. R., Jefferson '37, West Hartford
Lengyel, P., Budapest '31, San Francisco, California (Fairfield County)
Lenkowski, W. J., N. Y. U. '37, Waterbury
Leone, P. V., N. Y. Med. Coll. '50, Bridgeport
Leonhardt, C. G., Albany '53, New Britain
Lepow, I. H., Western Reserve '58, Farmington
Lepow, M. L., Western Reserve '52, Hartford
Lerner, A. B., Minnesota '45, New Haven
Lerner, M. R., Western Reserve '50, New Haven
LeRoy, J. B., Yale '50, Storrs (Windham County)
LeRoyer, C. P., Tufts '42, Hartford
Lesko, J. M., Duke '38, Bridgeport
Lesser, R. L., Cornell '67, Waterbury
Letourneau, D. J., Tufts '59, Pensacola, Florida (Hartford County)
Levenstein, M., N. Y. U. '58, Hamden
Levieff, L., Lausanne '50, Stratford
Levin, A. E., Tufts '30, Hartford
Levin, H. A., Univ. & Bellevue '18, New Haven
Levine, A. I., N. Y. U. '35, Rowayton
Levine, H., Harvard '41, New Britain
Levine, H., N. Y. U. '46, Middletown
Levine, H. P., Vermont '50, Stamford
Levine, I. R., Tufts '62, New Haven
Levine, J., Vermont '50, Stamford
Levine, M., Ghent, Belgium '60, Bloomfield
Levinsky, M., Maryland '28, Bridgeport
Levis, A. J., Zurich '63, Hamden
Levreault, G. V., Tufts '42, Hartford
Levy, A., Tufts '31, Winsted
Levy, B. Seton Hall '60, Hartford
Levy, H. D., Boston '59, Branford
Levy, L. L., Temple '46, New Haven
Levy, M. N., Tufts '23, Bay Harbor Islands, Florida (Fairfield County)
Levy, N., Yale '27, Branford
Levy, R. M., Tulane '56, Derby
Levy, S. H., Tufts '35, Stratford
Levy, T. S., Med. Coll. of S. C. '48, Bridgeport
Lewicki, E. S., Georgetown '35, Waterbury
Lewin, M. L., Albert Einstein '61, Bridgeport
Lewis, D. O., Yale '63, New Haven
Lewis, G. L., Yale '45, Simsbury
Lewis, H. D., Harvard '42, New Haven
Lewis, M., Guy's Hospital '50, New Haven
Lewis, S. D., George Washington '31, Palm Beach, Florida (Hartford County)
Lewis, S. H., Albert Einstein '64, Old Greenwich
Lewis, W. S., N. Y. U. '62, Bridgeport
L'Heureux, J. A., Boston '34, Meriden
Liao, S. J., Hsiang Ya '42, Middlebury
Licciardello, A. T., Harvard '47, Stratford
Licht, S., N. Y. U. '31, Coral Gables, Florida (New Haven County)
Lichtman, A., Zurich '53, Westport
Lidz, R. W., Basel '35, Woodbridge
Lidz, T., Columbia '36, New Haven
Lieberman, D. L., N. Y. U. '26, Chester
Lieberson, A. D., Yale '62, Westport
Liebowitz, S. A., Un. Basle '65, Hartford
Light, C. F., Hahnemann '57, Monroe
Lightbody, F. E. H., Edinburgh '51, Greenwich
Lillian, M., Georgetown '44, New Haven
Lin, P. T. C., Aurora '45, Ansonia
Linburg, R. M., Yale '64, Hartford
Lindenberg, L. B., Upstate Med. Ctr. '65, Hartford
Lindenmuth, W. W., Jefferson '38, New Haven
Linder, J. H., Columbia '27, Sharon
Lindskog, G. E., Harvard '28, Branford
Linnolt, E., Royal Charles, Stockholm '51, Hartford
Lintz, E. M., Western Reserve '66, Fairfield
Lion, D. J., State Univ. N. Y. '55, New Haven
Liotta, S., Boston '27, Essex (New London County)
Lipkoff, C. J., N. Y. U. '36, Milford
Lippman, K. J., Cornell '66, Westport
Lippman, L., New York Un. '67, Hartford
Lipton, H., St. Louis '32, Hartford
Lirot, S. L., McGill '32, Meriden
Lischner, M. D., Yale '30, Hartford
Lisi, K. R., St. Louis '64, Bridgeport
Liss, J. P., N. Y. Med. Coll. '62, Hartford
Litman, R. B., Yale '70, Bryn Mawr, Pennsylvania (New Haven County)
Litter, L., Basel '36, Hartford
Little, D. M., Jr., Harvard '44, Hartford
Little, M. H., Harvard '35, Willimantic
Little, O. A. G., Boston '35, Willimantic
Littman, E., Chicago '61, Norwalk
Livingston, R., Vermont '60, West Hartford
Livingston, W. T., Pennsylvania '43, New Britain
Lloyd, D. S., Duke '71, Hartford
Lobb, R. A., Hahnemann '37, Deep River
Lobdell, D. H., Michigan '56, Bridgeport

Lockhart, R. H., Yale ’28, Fairfield
Lockward, H. J., Western Reserve ’43, Manchester
Lockwood, J., Johns Hopkins ’30, New Preston (Fairfield County)
Loeser, L. K., Western Reserve ’52, Storrs
Loewald, E. L., Johns Hopkins ’48, Hamden
Loewald, H. W., Rome ’34, New Haven
Loewenberg, P. C., Berlin ’39, East Hartford
Logan, W. J., Yale ’25, New Haven
Loh, H. C., Tung-Teh ’50, West Haven
Lohman, W. H., Cornell ’45, Glastonbury
Lohrmann, W., Rochester ’43, Meriden
Loiacono, R. A., N. Y. Med. Coll. ’43, New London
Longo, A. D., Georgetown ’38, Portland
Longo, E. A., Yale ’60, Middletown
Longo, V. F., Long Island ’43, Seymour
Longo, V. J., Yale ’46, New London
Longstreth, G., Columbia ’65, Sharon
Lopatin, C. Louisville ’41, Bridgeport
Lopez, R. E., Havana ’49, Kensington
LoPresti, D. A., Long Island ’47, Hartford
Lord, B. J., Jr., Cornell ’43, Norwich
Losito, A. J., St. Louis ’38, Port St. Lucie, Florida (Fairfield County)
Lovallo, F., Tufts ’44, Sharon
Lovanio, R. G., N. J. Coll. Med. ’66, Bridgeport
Lovekin, L. G., Wayne ’43, Norwalk
Loveless, M. H., Stanford ’24, Westport
LoVetere, A. A., George Washington ’35, New Britain
Low, H. B. C., St. John’s University ’50, Hartford
Lowman, R. M., Maryland ’36, New Haven
Lowry, E. C., Cornell ’35, Guilford
Loyer, R. E., Wayne St. ’65, Waterbury
Lubchansky, J. H., N. Y. U. ’33, New London
Lublin, R., Johns Hopkins ’29, East Hartford
Luby, M. J., N. Y. U. ’53, Hartford
Lucas, J. J., Rome ’57, Hartford
Luchs, D., McGill ’50, Colebrook
Luciano, M. C., Pennsylvania ’44, Bridgeport
Lujic, P., Zagreb, Yugoslavia ’60, New Haven
Lund, D. A., Harvard ’61, New Britain
Lundberg, E. A., Vermont ’40, Stamford
Lundberg, G. A. F., Jefferson ’19, Manchester
Lundberg, G. A. F., Jr., Jefferson ’53, Manchester
Luria, S., Western Ontario ’38, Hollywood, Florida (Fairfield County)
Luria, S. B., Harvard ’43, Waterbury
Lyddy, J. R., N. Y. U. ’44, Stratford
Lydon, L. G. M., Yale ’40, Rocky Hill (New Haven County)
Lynch, F., Columbia ’43, Westport
Lynch, M. E., Harvard ’57, Avon
Lynch, V. A., Jefferson ’38, Bridgeport
Lynch, W. A., Indiana ’63, Hartford
Lynch, W. F., Jefferson ’52, New Haven
Lyon, G. A., Cornell ’41, Bridgeport
Lyons, B. E., Yale ’38, Norwalk
Lytle, E. L., St. Louis ’53, Wallingford
Lytton, B., London Hospital ’48, New Haven

Macaulay, W. P., McGill ’59, Hartford
MacCready, P. B., Johns Hopkins ’21, New Haven
MacCready, W. H., Harvard ’27, Windsor
MacDonald, C. A., Columbia ’59, Torrington
MacDougall, A. D., Cornell ’43, Groton
Macgregor, J. V., London ’28, Darien
Machcinski, V. A., Yale ’47, Danbury
Macionus, R. F., Vermont ’66, Cromwell
Mack, A. G., Albany ’43, Trumbull
Mack, D. E., Syracuse ’43, Windsor
Mack, G. T., Wuerzburg ’53, Cheshire
Mackay, I. M., Edinburgh ’56, Hartford
Mackay, W. D., Indiana ’28, Salisbury
MacKinnon, I., Cornell ’51, West Hartford
MacLeod, G. K., Cincinnati ’60, Bethesda, Maryland (New Haven County)
MacMaster, D. R., Dalhousie ’60, Litchfield
Mac Rae, D. W., Johns Hopkins ’64, Meriden
Madden, T. J., Univ. of Chicago ’44, New Britain
Madison, R. L., State Univ. N. Y. ’53, Stamford
Madwed, A. E., N. Y. Med. Coll. ’51, Bridgeport
Magauran, B. G., National Univ. ’54, Enfield (Tolland County)
Magendantz, H. G., Duke ’62, New Haven
Magida, M. G., Long Island ’46, Stamford
Magram, H. M., Columbia ’52, Middletown
Maher, P. H., N. Y. Med. Coll. ’65, Greenwich
Mahoney, J. J. McGill ’33, Norwich
Maidman, L., N. Y. U. ’40, Wilton
Maier, R. F., Tufts ’59, Somers
Maislen, S., Vermont ’14, Hartford
Major, J. W., Vanderbilt ’39, Willimantic
Maleh, J. D., Fac. of Med., Egypt ’58, Meriden
Malinconico, L. L., Tufts ’51, Hartford
Malloy, E. F., Cornell ’28, Stamford
Malloy, T. McK., Tufts ’62, Danbury
Malone, H. J., Vermont ’49, Manchester
Malone, R. F., Tufts ’43, Devon
Maloney, P. K., Jr., Georgetown ’60, Norwalk
Maloney, R. H., Emory ’48, Hartford
Malyska, F. A., Georgetown ’55, Bridgeport
Manas, A., Tufts ’67, Hartford
Mancall, I. T., Pennsylvania ’44, Hartford
Manchepalli, A. S. A., Mysore ’61, Wallingford
Mancinelli, M. J., Hahnemann ’43, Stamford
Mancini, A. D., Turin ’56, East Haven
Mancoll, M. M., Jefferson ’28, Hartford
Mancoll, W., Jefferson ’60, Hartford
Mandell, J., Boston ’48, New Britain
Mandl, G., Vienna ’32, Bethel
Manes, P. R., Vermont ’57, Waterbury
Mangieri, J. V., N. Y. Med. Coll. ’63, Bridgeport
Manheim, G., Vermont ’46, New Haven
Maniatis, W. R., Yale ’47, Bridgeport and New Haven
Manimbo, S. G., Far Eastern Univ., Philippines ’63, Stamford
Manjoney, R. C., Vermont ’50, Derby
Manjoney, R. J., Vermont ’53, Bridgeport
Manjoney, V. A., Vermont ’47, Bridgeport
Manlapaz, J. S., Santo Tomas ’56, Danbury
Mann, N. M., Long Island ’45, Hartford
Mann, W. A., Illinois ’48, Greenwich
Manning, I. H., Woman’s Med. Pa. ’50, Norwich
Mannix, H., Jr., Cornell ’50, Hartford
Mansourian, V., Paris ’67, New Haven
Manzi, J. A., Cork ’55, Middletown
Mara, N. F., Vermont ’62, Vernon
Marchand, G. A., Jefferson ’64, New London
Marcin, M. J. R., Georgetown ’66, Columbia, Maryland (Hartford County)
Marcus, H., N.Y.U. ’39, Greenwich
Marcus, L. I., Louvain ’67, New Canaan
Margold, A. M., Vermont ’25, Norwalk
Margolick, M., McGill ’35, Putnam
Margolis, R. N., Tufts ’58, New Haven
Margolius, N. C., Cornell ’33, Waterbury
Marianaro, N. A., St. Louis ’30, Avon
Mariani, R. A., Pennsylvania ’44, New London
Maric, R., Un. Croatia ’63, Derby

Marieb, N. J., Rochester '59, Orange
Marino, A. M., Georgetown '64, Greenwich
Marino, F. S., Maryland '42, Hartford
Marino, R. S., Boston '42, Waterbury (New Haven County)
Marinucci, E. D., N. Y. Med. Coll. '44, Norwalk
Marjani, M. A., Un. Tehran '61, Waterbury,
Mark, H. H., Vienna '57, New Haven
Markley, D. N., Edinburgh '36, Hartford
Markley, H. E., Yale '43, Greenwich
Markley, L. L., Prague '25, Bridgeport
Marks, E. M., Buffalo '46, Bridgeport
Markwald, H. W., Berlin '37, New Hartford
Marmer, E. L., Alabama '64, Rockville
Maron, T. W., Jr., New Jersey '67, Essex
Marrash, S. E., Am. Univ. Beirut '57, Bridgeport
Marsh, A., St. Andrews '37, New Britain
Marsh, C. O., Woman's Med. Coll. Pa. '51, West Hartford (New Haven County)
Marsh, R. R., Harvard '45, West Hartford
Marsh, S. H., Harvard '51, Hartford (New Haven County)
Marshak, I. J,, Tufts '26, New Haven
Marshall, B. R., Tufts '54, Hartford
Marshall, D., Northwestern '47, Hartford
Marshall, D. C., Harvard '57, New London
Marshall, J. F., Miami '66, New Haven
Marshall, L. F., Chicago '54, West Hartford
Martelon, G. F., Boston '48, Bridgeport
Martin, E., Yale '40, New Britain
Martin, J. E., Dalhousie '42, Norwich
Martin, J. G., Yale '33, West Hartford
Martin, Katharine Hawley, Yale '44, Watertown
Martin, M. G., Queen's Univ. Can. '44, Norwich
Martin, R. A., Vermont '37, Bridgeport
Martin, R. S., Cornell '61, Hartford
Martin, W. E., N. Y. Med. Coll. '52, Milford
Martinson, E. O., Columbia '35, Madison (Middlesex County)
Marvin, H. M., Harvard '18, New Haven
Marx, F. G., Pennsylvania '53, New London
Marzialo, N. A., Tufts '48, Manchester
Mascoli, N. M., Jr., Georgetown '63, Waterbury
Masi, A. V., New Jersey Coll. Med. '62, Bridgeport
Mass, H., Leiden '56, New Haven
Massey, D. M., Hahnemann '36, Bridgeport
Massey, R. U., Wayne '46, Farmington
Massie, W. J., Meharry '47, New Haven
Masterson, T. J., Tufts '45, Norwich
Mastrangelo, A., Jr., Boston '39, Stamford
Mathews, J., Trivandrum '58, Enfield
Matteis, J. T., Yale '26, Kensington
Matthews, L. G., Seton Hall '63, Freehold, New Jersey (Hartford County)
Mattie, L. R., Yale '52, New Haven
Mattson, R. H., Boston '57, New Haven
Matyszewski, S. E., Yale '62, Waterbury
Mauck, F. T., Pennsylvania '57, Farmington
Mauks, C. W., Budapest '32, Danbury
Maurer, L. L., Yale '16, Woodbridge
Maurer, W. S., Yale '38, Willimantic
Maxham, D. L., Vermont '53, Bridgeport
Mayo, E. R., Tufts '38, Waterbury
McAdams, G. B., Johns Hopkins '45, Hartford
McAlenney, P. F., Yale '29, New Haven
McAndrews, J. F., Columbia '46, Hartford
McCabe, E. B., Jefferson '44, Winsted
McCarthy, C. P. N., Univ. Coll. Cork '60, New Haven
McCarthy, J. D., Rochester '55, Hartford
McCarthy, J. C., Yale '62, Evansville, Indiana (Litchfield County)
McCarthy, R. E., Hahnemann '66, Middletown
McCaul, K. F., Nat'l. Univ. Ireland '50, Norwalk
McCawley, A., Glasgow Un. '48, Hartford
McCleary, E. S., Univ. Rochester '53, Wallingford
McClure, P. H., Emory '64, Bristol
McCooey, J. H., State Univ. N. Y. '56, Hartford
McCormick, J. M., Dublin '47, Hartford
McCrann, D. J., Tufts '34, Hartford
McCrann, W. E., Univ. Coll. Dublin '54, Westport
McCreery, E. P., Jr., Virginia '42, Fairfield
McCue, M. P., Harvard '34, Waterford (Hartford County)
McCullough, C. D., N. Y. Med. Coll. '58, Bridgeport
McCullough, W. B., Columbia '65, New Haven
McDermott, G. M., Galway Med. School '58, Bristol
McDermott, J. F., Cornell '23, Honolulu, Hawaii (Hartford County)
McDermott, J. J., N. Y. U. '52, Danbury
McDonagh, P. H., Dublin '51, Greenwich
McDonald, J., Un. Glasgow '61, Glastonbury
McDonald, R. L., N. Y. Medical College '60, Roxbury
McDonnell, R. R., Jefferson '45, New Haven
McDowell, A. V., Albany '52, Middletown
McFarland, F. W., Vermont '28, Stamford
McFarland, W. J., Yale '39, New London
McGann, D. M., National Univ. Ireland '52, South Windsor
McGann, R. F., St. Mary's Hosp., London '58, Meriden
McGarry, J. F., Vermont '46, Bridgeport
McGarry, J. J., Yale '51, Darien
McGaughey, J. D., III, Jefferson '44, Wallingford
McGourty, A. F., N. Y. Homeo. '18, Norfolk (Fairfield County)
McGowan, G. E., Laval '57, Hartford
McGowan, T. S., Tennessee '32. Storrs (Windham County)
McGrath, B. J., Yale '59, Guilford
McGrath, T. J., Georgetown '61, Norwich
McGuire, C. W., New York '61, New Haven
McIlroy, P. T., Queen's 16, Danbury, New Hampshire (Fairfield County)
McIntyre, F. P., Vermont '42, Stamford
McKay, D., Queen's Univ. '56, Middletown
McKee, J. B., Jr., Virginia '59, New Haven
McKee, D. R., N. Y. U. '59, Stamford
McKendree, C. G., Virginia '43, Greenwich
McKenna, J. F., California '48, Torrington
McKeon, J. J., Hahnemann '39, Hamden
McKeon, W. F., New York '59, Norwich
McKnight, R. S., Pittsburgh '45, Hartford
McKnight, W. K., Pittsburgh '35, Bridgeport
McLean, B. A., Maryland '63, Hartford
McLean, C. E., Yale '45, Hartford
McLean, T. S., Jr., Vermont '34, Stratford
McLeod, C. E., Vermont '34, Middletown
McLoughlin, P. J., New York '58, Bridgeport
McNerney, J. C., Jefferson '27, Stamford
McNulty, T. F., Georgetown '32, Hartford
Meacham, C. T., Pennsylvania '30, Stamford
Mead, P. H., Columbia '54, Hartford
Meehan, B. J., Lausanne '61, Newtown
Mehrl, P. B., Washington '56, Danbury (Litchfield County)
Meia, H. B., Nacional De Cordoba '63, Milford
Meigs, J. W., Harvard '40, New Haven
Meisner, B. M., Rochester '60, Manchester
Meister, L. F., Long Island '30, Stuart, Florida (Litchfield County)
Mekrut, J. A., St. Louis '31, Sun City Center, Florida (New Haven County)
Mellisy, A., Long Island Coll. Med. '43, South Kent
Melmed, R. M., Jefferson '56, Greenwich

Meltzer, S. B., Long Island '44, Bridgeport
Mendelsohn, W., Johns Hopkins '33, Hamden
Mendelson, L. M., Med. Coll. Virginia '65, Hartford
Mendillo, J. J., Columbia '45, New Haven
Mendoza, J. P., Jr., Santo Tomas '68, Bristol
Mendoza, R., Mexico '50, Norwalk
Meno, G. P., Geneva '59, Norwalk
Menousek, J. A., Vermont '32, Juno Beach, Florida (Hartford County)
Mensch, A. H., St. Un. New York '62, New London
Meo, R. C., George Washington '34, Waterbury
Merdinolu, M. A., Istanbul '56, Norwalk
Mergenthaler, F. W., New York '61, Bridgeport
Meridy, H. W., Un. Vermont '66, Hartford
Mermann, A. C., Johns Hopkins '47, Guilford
Merriman, H., Columbia '36, Waterbury
Mertz, J. J., Harvard '61, Southington
Meshken, J., Rush '37, Bridgeport
Messina, M. C., Tennessee '27, Clearwater, Florida (Hartford County)
Messinger, H. J., Basel '39, Fairfield
Messore, G., Univ. of Naples '50, Milford
Methot, L. G., Georgetown '58, Bridgeport
Meunier, J. L., Vermont '38, Torrington
Meyer, J. L., Long Island '49, Putnam
Meyers, R. A., Michigan '31, Watertown
Michael, A. H., Athens '53, Bridgeport
Michalka, J. J., St. Louis '58, Bridgeport
Micheels, L. J., Utrecht '47, Westport
Michel, L. I., Long Island '43, New Haven
Mickenberg, I. D., S. U. N. Y. '65, Southbury
Middleton, C. J., S.U.N.Y. '64, Danielson
Mignone, J., Yale '33, New Haven
Milano, A. F., Nat'l. Un. Ireland '66, Bethany
Milano, M. F., Nat'l. Un. Ireland '66, Milford
Milano, N. A., Georgetown '27, West Haven
Milazzo, N. J., State Univ. N. Y. '54, Derby
Milewski, S. A., Dublin '56, Manchester
Milici, J. J., Hahnemann '40, West Haven
Milikow, E., N. Y. U. '64, Hartford
Millard, D. H., Georgetown '46, Greenwich
Millen, S. R., George Washington '38, New Haven
Miller, D. E., Hahnemann '59, Middletown
Miller, D. F., Yale '56, Derby
Miller, G. R., Tufts '39, Manchester
Miller, H. B., Rush '33, Hartford
Miller, H. K., Columbia '32, Stamford
Miller, J. M., Albany '67, Hartford
Miller, M. M., St. Un. N. Y. '51, Cheshire
Miller, R. B. Loyola Univ. '42, Newtown
Miller, R. G., Tufts '51, Danbury
Miller, S. M., Tulane '41, Bloomfield
Milles, S. S., Rochester '55, New Haven
Mills, B. L., Vermont '25, Northfield, Ohio (New London County)
Mills, C. W., Cornell '38, Norwalk
Milone, H. S., Georgetown '50, Hamden
Milone, J. E., Naples '39, Norwich
Milstone, J. H., Johns Hopkins '37, New Haven
Milyko, A. B., Columbia '55, West Hartford
Mino, M. E., Universidad Central '52, Wethersfield (Litchfield County)
Minor, J. V., Jr., Georgetown '46, Norwalk
Minor, L. W., Yale '32, Middletown
Minot, H. D., Jr., Harvard '50, Norwalk
Mintell, D. F., Jefferson '64, Glastonbury
Mirabelli, V., Padua '53, Bristol
Mirabile, C. S., Jr., McGill '63, Sharon
Mirabile, C. S., McGill '30, Hartford
Mirabile, T. J., Georgetown '37, East Hartford
Mirkhani, M., Tehran '51, Cheshire
Mirrer, E., Geneva '65, Waterbury
Miselis, F. J., Boston '45, Uncasville
Misuk, J. F., Georgetown '32, Meriden
Mitchell, G. V., McGill '38, Torrington
Mittelman, J. A., Pennsylvania '48, Hartford
Mittelmann, M., Chicago '57, Hartford
Mlynarski, J. A., Georgetown '39, New Britain
Moadel, M. M., Tehran '59, Westport
Moalli, D. E., Boston '61, New London
Moench, J. C., Rochester '45, New Haven
Mogil, M., Buffalo '39, New Haven
Molloy, E. M., N. J. Coll. Med. '66, Fairfield
Molloy, P. M., Yale '59, New London
Molloy, R. J., Cornell '48, Hartford
Molnar, G. J., Georgetown '43, Bridgeport
Moloney, D. R., Galway '59, Hartford
Molumphy, P. E., Yale '44, New Haven
Mombello, G. E., Albany '64, New Haven
Monagan, T. M., Harvard '40, Waterbury
Monahan, D. T., Yale '33, Bridgeport
Mongillo, F., Med. Coll. Va. '28, New Haven
Montgomery, J. S., Southwestern '61, New Haven
Monti, L. J., Vermont '41, Farmington
Montimurro, J. A., Yale '52, Greenwich
Montoni, E. J., Georgetown '55, West Simsbury (Litchfield County)
Moon, W. K., Catholic Med. Coll. '64, Torrington (Hartford County)
Mooney, J. P., N. Y. Med. Coll. '56, Shelton (New Haven County)
Mooney, S., Tufts '27, Bridgeport
Moore, C. D., Queen's '28, Lehigh Acres, Florida (Fairfield County)
Moore, E. J. T., Tufts '48, Waterbury
Moore, M. F., State Univ. N. Y. '55, New Canaan
Moore, M. R., Queen's '29, Spring Hill, Florida (New London County)
Moore, R. J., Toronto '52, Independence, Iowa (New London County)
Moore, R. W., N. Y. U. '43, Sharon
Moore, S. W., Harvard '30, Sharon
Moore, W. J., Columbia '21, Cheshire
Moreschi, F. P., Bologna '51, Meriden
Morgan, K. R., Yale '42, Fairfield
Morgan, L. G., N. Y. Med. Coll. '49, Stamford
Morgan, W. O., Georgetown '30, Westport
Morgan, W. S., Yale '51, New Haven
Morhardt, C. E., N. Y. Med. Coll. '61, West Hartford
Moriarty, J. P., Vermont '47, Stamford
Morley, D. C., Queen's '56, Greenwich
Morrill, H. F., Harvard '25, Wolcott
Morris, F. R., Maryland '41, Bridgeport
Morrison, D. W., Columbia '40, Manchester
Morrison, J. B., Yale '48, Orange
Morrison, J. E., Maryland '46, Norwich
Morrison, M. A., N. Y. U. '65, Fairfield
Morrison, R. F., N. Y. U. '64, Meriden
Morrissett, L. E., Med. Coll. Va. '30, Richmond, Virginia (Fairfield County)
Morrissey, V. J., Georgetown '32, Rocky Hill (New Haven County)
Morrow, H. S., Columbia '40, New Milford
Morse, E. E., Harvard '58, Hartford
Morse, W. J., Vermont '61, New London
Morse, W. J.,Vermont '31, Sanibel, Florida (New London County)

Moses, J. A., Trivandrum, India '58, Fairfield
Moskowitz, H., St. Univ. New York '59, West Hartford
Moskowitz, R. I., S.U.N.Y. '67, Willimantic
Moss, A. M., Toronto '47, Fairfield
Moss, R., St. Univ. New York '63, New Britain
Mostel, A. P., Albert Einstein '60, Stamford
Mott, F. E., Buffalo '41, New Haven
Motyka, S. J., Arkansas '38, Pismo Beach, California (Hartford County)
Moulyn, A. C., Utrecht '30, Stamford
Moyer, W. T., Jr., Pennsylvania '47, Manchester
Muangman, P., Chiengmai Un. Hosp. '64, Hartford
Mucha, T. F., Jefferson '64, Hartford
Mueller, R. E., Yale '63, Hartford
Mujeeb, M., Osmania Med. Coll. '60, Stamford
Mulaire, V. J., Boston '39, Stamford
Mulford, E. H., II, Duke '41, Norwalk
Mulhern, P. H., Birmingham '50, North Haven
Mulligan, T. M., Boston '38, Waterbury
Munch, R. V., St. Louis '62, Winsted
Murcko, W. J., Marquette '37, Torrington
Murphy, C. A., Long Island '33, Chatham, Massachusetts (Fairfield County)
Murphy, E. F., Tufts '55, Windsor
Murphy, J. C., Columbia '32, Dublin, Ireland (Fairfield County)
Murphy, J. J., Tufts '43, East Hartford
Murphy, J. M., Cornell '60, Greenwich
Murphy, J. P., N. Y. Med. Coll. '50, Cos Cob
Murphy, O. L., Vermont '21, Simsbury
Murphy, R. D., Tufts '47, Wethersfield
Murphy, T. F., Jefferson '33, West Hartford
Murray, J. G., N. Y. U. '43, Greenwich
Murray, J. H., Temple '67, Hartford
Murray, J. T., N. Y. U. '47, New London
Murray, W. C., Tufts '53, Bristol
Murray, W. J., Jr., Cornell '47, New London
Musto, A., Georgetown '68, Bridgeport
Musto, D. F., Univ. Washington '63, New Haven
Myerson, D. A., Columbia '65, Derby
Myerson, M., Tufts '61, Hartford
Myerson, P. J., Columbia '65, Derby
Mylon, E., Berlin '21, New Haven
Nadel, H., Buffalo '60, Glenbrook
Nadel, M. S., Columbia P & S '62, Middletown
Nagaraja, U., Grant Med. Coll. '60, New Milford
Nagle, J. A., Jefferson '55, Stamford
Nagourney, D., Long Island '36, Bridgeport
Naiman, P. T., Columbia '63, Milford
Nair, S., Madras '51, Norwalk
Nakhoul, J., Geneva '53, Hartford
Nanni, F. P., Lausanne '57, Waterbury
Narowski, J. J., Tufts '43, Derby
Nathanson, R. B., Albany '66, West Hartford
Neff, W. E., Jr., Columbia '33, Cheshire
Neidlinger, W. J., Cornell '33, Hartford
Neill, M. H., Columbia P. & S. '43, Hartford
Nejame, F. F., Mexico '60, Waterbury
Nelligan, D. J., Yale '55, Westbrook (New London County)
Nelson, R. K., Minnesota '59, New Britain
Nelson, W. N., George Washington '26, Cromwell
Nemec, J. M., Tufts '66, Old Greenwich
Nemoitin, B. O., Long Island '34, Stamford
Nepomuceno, M. N., St. Tomas '52, Willimantic
Nesbitt, K. A., Albany '51, Torrington
Nespor, R. W., Boston '33, Westport
Neth, E. J., McGill '53, Bridgeport
Neth, W. F., McGill '55, Trumbull
Neumann, C. P., Pennsylvania '43, New Canaan
Neumann, H. H., Univ. Vienna '32, New Haven
Nevins, R. A., Georgetown '51, Fairfield
Nevulis, A. V., Vermont '38, New Britain
Newberg, M. E., Columbia '63, Greenwich
Newell, R. C., Boston '56, Bloomfield
Newman, A. A., Long Island '42, Bridgeport
Newman, H. R., Toronto '35, New Haven
Newman, R., Johns Hopkins '30, Woodbridge
Newman, R. D., Un. California '62, Greenwich
Newton, R. F., Yale '47, Hamden
Nezhad, F. M., Tehran '56, Waterbury
Nicholl, R. G., Phila. Coll. Osteo. Med '33, Greenwich
Nichols, C. W., Vermont '20, Wellfleet, Mass. (Fairfield County)
Nichols, E., Yale '39, Hartford
Nichols, F. L., Columbia '42, Hartford
Nicholson, R. E., Tulane '42, Hartford
Nickou, N., Univ. Cincinnati '49, Branford
Niederman, J. C., Johns Hopkins '49, New Haven
Niell, J. P., Nat'l. Un. Cordoba-Argentina '65, Stamford
Nielsen, T. M., Copenhagen '38, New London
Niemann, C. P., Wurzburg '52, East Granby
Niesyn, E. D., Georgetown '53, Bridgeport
Nino, A. F., Nat'l. Un. Colombia '63, Hartford
Nix, H. R., Alberta, Canada '61, Manchester
Nixon, J. T., N. Y. U. '51, New Haven
Norbert, G. F., Tufts '65, Avon
Nodelman, J., Yale '29, Hamden
Nolan, J. J., Pittsburgh '42, Stamford
Nolan, J. O'L., Tufts '40, Hartford
Nolan, T. F., Yale '49, Greenwich
Nolasco, D. R., Coimbra '51, New Haven
Noniewicz, S. J., St. Louis '56, New Britain
Noonan, R. H., Long Island '47, Bridgeport
Norman, P. S., Tufts '56, Manchester
Norrington, E. G., N. Y. Med. Coll. '39, Norwalk
Northman, F. F., Breslau '34, Bridgeport
Northrop, R. A., Jefferson '32, Norwalk
Norton, W. S., Columbia '37, Wallingford
Nosce, L. V., Sto. Tomas '63, Manchester
Nourizadeh, Ali-Reza, Tehern, '59, New Britain
Novack, S. N., S. U. N. Y. '66, Norwalk
Nuland, S. B., Yale '55, Milford
Nunes, M., Howard '54, Waterbury

O'Brasky, G. H., Jefferson '20, New Haven
O'Brasky, L., Jefferson '22, New Haven
O'Brien, F. H., Columbia '38, Waterbury
O'Brien, F. J., Boston '54, Hartford
O'Brien, G. J., McGill '63, Stafford Springs
O'Brien, J. E., Vermont '61, Hartford
Oceretko, J., Friedrich-Alexander Un. '50, Bristol
O'Connell, C. G., Un. Coll. Ireland '62, Vernon
O'Connell, E. B., Yale '41, New Haven
O'Connell, E. J., Tufts '34, Unionville
O'Connell, J. D., Harvard '39, Hartford
O'Connell, J. F., Vermont '21, Hartford
O'Connell, M. F., Yale '22, Hartford
O'Connell, P. B., Hahnemann '67, Wethersfield
O'Connell, P. H., Loyola '29, Norwich
O'Connell, T. J., N. Y. Med. '48, Hartford
O'Connor, L. E., Univ. of Galway '55, Rockville (Hartford County)
Odim, U., Kansas '56, Norwich
Oelschlegel, H. C., Jefferson '11, Torrington
Oesau, H. T., Jefferson '26, Stratford
Oesau, H. T., Jr., Jefferson '62, Bridgeport

Ogden, R. T., Harvard '24, Sanford Maine (Hartford County)
Ogilvie, J. B., Yale '34, Stamford
Ohanesian, J. H., Hahnemann '49, New Britain
O'Hayre, W. L., Un. Colorado '59, Hartford
O'Hurley, J. G., Jefferson '52, Hartford
Olejnik, W., Rijksuniversiteit '54, Meriden (New London County)
O'Looney, J. J., Jr., Jefferson '45, Bridgeport
Olore, L., Tufts '43, Waterbury
Olsavsky, J. C., Georgetown '43, Bridgeport
Olsen, R. C., Long Island '45, New London
Olson, L. E., Yale '54, New Haven
O'Neil, T. J., New York Med. Coll. '60, Easton
O'Neill, J. J., Tufts '48, New Haven
Opinsky, M., Georgetown '46, Hartford
Oppenheimer, K., Heidelberg '20, Norwich
Opsahl, J. C., Alberta '54, Boston, Mass. (New Haven County)
Orbach, E. J., Berlin '24, New Britain
O'Regan, P. T., National '52, Meriden
O'Reilly, H. F., St. Un. N. Y. '53, New Britain
Orgun, I. N., Istanbul '53, Avon
Orlins, M. D., Amsterdam '56, Norwalk
Orlowski, A. W., Tufts '36, Torrington
Ormand, J., Georgetown '40, Norwalk
Ormrod, J. K. T., McGill '43, Hartford
Ornston, D. G., Jr., Pennsylvania '59, New Haven
O'Rourke, G. W., New York Med. Coll. '61, Fairfield
O'Rourke, J., Georgetown '49, Hartford
Orphanos, J. P., N. Y. Med. Coll. '58, Greenwich
Orr, H. D., Jr., Boston '48, Norwalk
Orr, J. T., Columbia '52, Danbury
Orth, R. H., Cornell '53, Stamford
Osadchey, L. M., Upstate Med. Ctr. '63, Meriden
Osborn, D., Yale '57, Norwalk
Osborn, S. H., Tufts '14, West Hartford
Oster, K. A., Cologne '34, Bridgeport
Ostriker, M., Bellevue '52, Stamford
Ostriker, P. J., State Univ. N. Y. '50, Stamford
Ostrov, M. R., Chicago '63, Waterbury
Otis, F. N., Tufts '18, Bloomfield (New Haven County)
Otis, I. S., George Washington '17, Meriden
Otis, R. D., Yale '49, Hartford
O'Toole, P., Trinity '53, Norwich
Owens, A. P., McGill '37, Bridgeport
Owens, G., Harvard '50, Hartford
Oxley, L. L., Meharry Med. Coll. '59, Storrs (Windham County)
Oxnard, E. W., Harvard '36, Cheshire
Ozcomert, S., Ankara '47, Stamford
Ozenberger, J. M., Missouri '58, New Haven
Ozonoff, M. B., Northwestern '54, Newington

Paardenkooper, J., Utrecht '58, Moodus
Pace, S. F., Rome '52, Wethersfield
Padula, R. D., Cincinnati '30, Norwalk
Paggioli, J. W., Georgetown '56, Meriden
Pagliaro, J. J., Georgetown '37, Shelton
Painter, R. L., Indiana '59, Putnam
Painter, R. W., Tennessee '46, Hartford
Palermino, D. A., Tufts '58, Hartford
Palluotto, W. V., N. Y. Med. Coll. '50, New Haven
Palm, C. R., N. Y. U. '63, Torrington (New Haven County)
Palma, J. F., Vermont '59, East Hartford
Palmer, W. M., Cornell '51, New London
Palmieri, M. L., Yale '32, Middletown
Palmieri, M. W., Naples '33, New Haven
Palomba, E. A., Georgetown '59, Somers
Panettieri, A. J., Vermont '37, Bridgeport
Pantaleo, C. V., Creighton '43, New Haven
Papa, J. S., Tufts '28, Fort Lauderdale, Florida (Hartford County)
Paquette, R. R., Seton Hall '66, Brookfield
Pardi, M. T., Pisa-Italy '61, Milford
Pardi, V. M., Un. Pisa '60, Milford
Parente, L., Emory '31, Hamden
Parisi, A. J., Tufts '44, New Haven
Park, S., Seoul Nat'l Univ. '49, North Grosvenordale
Parke, D W., Ohio '50, Meriden
Parker, R. L., Western Ontario '41, Bridgeport
Parlato, H. A., N. Y. U. '36, New Britain
Parlato, M. A., Yale '08, Derby
Parrella, G. S., Yale '41, Milford
Parrella, L. A., Tufts '34, North Haven
Parshley, P. F., Pennsylvania '27, Pinehurst, North Carolina (Hartford County)
Parthenis. A., Western Ontario '61, Norwich
Partridge, W. P., Harvard '20, Fort Lauderdale, Florida (Hartford County)
Pascal, T. J., Rush '31, Bridgeport
Pascale, J. F., Univ. Chicago '59, East Amherst, New York (New Haven County)
Pascual, R. S., Un. of the East '64, New London (New Haven County)
Pasetto, E., Vermont '36, Waterbury
Pasquariello, D. W., Naples '36, Bridgeport
Passarelli, M. N., Yale '59, New Haven
Passman, B., Vermont '59, Hartford
Pastel, H., Columbia '48, Manchester
Pasternak, H. S., SUNY '60, Hartford
Pasternak, M., Toronto '36, New Haven
Patterson, E. S., Iowa '54, Meriden
Patterson, H. C., Bowman Gray '45, Danbury
Patterson, J. W., Western Reserve '49, Farmington
Patterson, M. B., Boston '45 Greenwich
Paul, F., Munich '24, Norwalk
Paust, J. C., Wisconsin '67, New Haven
Pavlo, L. J., Mainz, W. Germany '55, Ansonia
Pavlo, M. M., Univ. Prague '45, Ansonia
Peacock, A. U., Rush '33, Hartford
Pearce, M. G., Texas '22, Austin, Texas (Fairfield County)
Pearlstone, A. D., State Univ. N. Y. '55, Fairfield
Peck, B. C., Long Island '31, New Britain
Peck, M. S., Western Reserve '63, New Preston
Pella, J., Havana '42, Middletown
Pelliccia, O., Jr., Johns Hopkins '39, New Haven
Pelz, K., Vienna '32, Clinton (New Haven County)
Pendagast, E. L., Jr., New York '58, Fairfield
Penner, S. L., Columbia '34, Bridgeport
Pennington, R. B., Virginia '51, Middletown
Pentz, P. G., Jefferson '61, Hartford
Pepe, A. J., Maryland '35, Ansonia
Pepe, V., Yale '46, Meriden
Pepper, D. S., Pennsylvania '32, Gladwyne, Pennsylvania (Hartford County)
Perakos, G. P., Georgetown '32, Kensington
Peralta, C., Santo Domingo '50, Bridgeport
Perkins, J. A., McGill '41, Hartford
Perlin, L., Lausanne '59, Middletown
Perlis, S. J., Michigan '50, Westport
Perlman, J. M., State Univ. N. Y. '63, Bridgeport
Perlswig, E. A., Pennsylvania '48, New Haven

Pernetti, A. M., N. Y. Med. Coll. '29 Old Saybrook
Perry, D. D., N. Y. Med. Coll. '45, Bristol
Pesce, J. R., Louvain '67, Bridgeport
Pesiri, R. A., Ottawa '59, Stamford
Persons, R. E., Syracuse '43, Meriden
Pet, D., Maryland '62, Hartford
Peters, D. H., Tufts '56, Kent
Peters, R. H., Yale '55, New Haven
Peterson, C. G., Jr., Yale '55, Willimantic
Peterson, D. M., Pennsylvania '56, New London
Peterson, R. C., Yale '48, Stratford
Petrelli, E. A., Georgetown '66, New Haven
Petrelli, J., Yale '25, New Haven
Petrie, S. J., Temple '50, Derby
Petrillo, C., Yale '38, New Haven
Petruschow, A., Frankfurt '48, Newtown
Phelps, M. O., McGill '29, Hartford
Philbrick, C. J., Jr., Tufts '55, Milford
Phillips, C. C., Louisvile '49, New Haven
Phillips, K. T., Tufts '19, Putnam
Phillips, N. T., Boston '44, Norwich
Phinney, A. O., Columbia '53, Hartford
Piacente, S. S., Rochester '40, Hartford
Piazza, G. J., Boston '32, New Haven
Piccirillo, A. V., Yale '54, Wallingford
Piccolo, P. A., Maryland '37, New Haven
Pickett, L. K., Yale '44, New Haven
Pierce, J. A., Duke '55, Wethersfield
Pierce, J. A., Georgetown '50, Newington
Pierce, J. M., Tufts '62, Winsted
Pierson, L. A., Tufts '27, Meriden
Pike, M. M., Harvard '25, Farmington
Pilot, M. L., Illinois '48, New Haven
Pimpinella, R. J., Rochester '60, Torrington
Pinkes, A. H., Lausanne '62, New Haven
Pinkes, S., Tufts '50, Hartford
Pinn, A. S., Laval '29, New Haven
Piotrowska-Nyerick, K. I., Warsaw '57, Orange
Pious, W. L., Jefferson '32, Hamden
Piro, J. F., Georgetown '56, Norwalk
Piscatelli, R. L., Tufts '61, Waterbury
Pisetsky, M. M., Tufts '61, Hartford
Pitegoff, C. H., St. Louis '40, New Haven
Pitegoff, G. I., St. Louis '37, Hartford
Pito, V. J., de Napoli '56, New Britain
Pizzo, P. S., N Y. U. '45, Hartford
Placer, J. W., N. Y. Med. Coll. '64, Bridgeport
Plakins, H. G., Univ. of Zurich '52, Wallingford
Platt, J. M., Physicians & Surgeons '57, Hartford
Platz, E. J., Pennsylvania '43, Glastonbury
Platz, J., Cologne '31, East Hartford
Pleban, W. E., Louvain '64, Bridgeport
Poczabut, J. S., Vermont '41, Stamford
Poirier, T. M., Georgetown '34, Windsor
Pola, W. E., Louisville '32, New Britain
Polayes, I. M., Albany '59, New Haven
Polito, F. L., Yale '21, Torrington
Polito, J. C., N. Y. Med. Coll. '52, Torrington
Polivy, C., N. Y. U. '42, Hartford
Polsky, E., Ghent '59, Hamden
Pool, J. L., Columbia '34, Norwalk
Pope, R. H., Johns Hopkins '45, Bridgeport
Portnoy, L. M., St. Univ. New York '59, Bridgeport
Poverman, D., Vermont '32, New Haven
Powell, B., Havana Un. '60, Norwich
Powell, N. R., Yale '60, Wethersfield
Powers, E. D., New York '52, Hartford
Prangley, A. G., Jr., Cornell '52, Greenwich
Pratt, H. S., Louisiana State '58, Meriden
Preble, C. R., Washington '53, Glastonbury
Prescott, B. D., McGill Univ. '61, Storrs
Prestley, W. F., Harvard '40, Hartford
Preston, T. R., Yale '25, West Hartford
Price, J. T., New York Med. Coll. '63, Glastonbury
Prignano, J. V., Georgetown '40, Manchester
Prince, M. L., New Jeresy '61, Danbury
Prindle, C. G., Temple '37, Hartford
Pringle, E. W., Tufts '66, Higganum
Prins, S. A., Amsterdam '31, Middletown
Prioli, K. M. Seton Hall '60, Norwich
Prokesch, C. E., N. Y. Med. Coll. '49, New London
Prokop, J. D., Yale '59, Stamford
Prosnitz, L. R., St. Univ. New York '61, New Haven
Prosser, F. D., Cornell '28, Putnam
Pruett, K. A., Harvard '62, New Haven
Prunier, J. H., Cornell '56, Greenwich
Pua, P. K., Philippines '58, Bridgeport
Pulaski, J. E., Georgetown '44, Hartford
Pullen, E. M., Cornell '24, New Canaan
Pullen, R. D., Yale '54, Windsor
Pullen, R. W., Yale '21, Landstuhl, Germany (Hartford County)
Purcell, J. J., St. U. N. Y. '63, Hartford
Purnell, M. A., Boston '49, Rockville
Purnell, O. J., Cornell '42, Rockville
Purney, J., McGill '39, Bristol
Pyrtek, L. J., Rush '42, Hartford
Pyun, K. S., Severance Union Med. Coll. '57, Meriden

Querijero, G. B., Un. East Philippines '64, Waterbury
Quigley, W. F., New York Med. Coll. '56, Waterbury
Quintiliani, A., Harvard '29, Norwich
Quinto, E. L., Lausanne '59. Hartford

Rabinovitch, P. I., Vermont '63, Waterford
Rablen, E. C., Graz, Austria '50, Quaker Hill
Rabuffo, J. V., Georgetown '65, Middletown
Raccuglia, G., Rome, Italy '50, New Haven
Rackliffe, R. W., McGill '52, New Britain
Radding, P., Harvard '48, Hartford
Radom, M. M., Jefferson '25, Hartford
Radowiecki, M. W., N. Y. Med. '43, Hamden
Raff, I. L., N. Y. Med. Coll. '64, Danbury
Raff, N. C., Johns Hopkins '61, Westport
Raffa, J., Columbia '34, Glastonbury
Raffaele, F. J., W. Ontario '30, Stamford
Rafkind, A. B., Paris '37, Middletown
Ragaza, E. P., Santo Tomas '63, New Haven
Ragland, S., Jr., Med. Coll. Virginia '50, Colebrook
Ragusa, R. P., Georgetown '51, Bridgeport
Raheb, E. B., Georgetown '56, Danielson
Rainville, T. J., St. Univ. New York '61, Stamford
Ralph, F. T., Temple '43, Darien
Ralston, R. M., Johns Hopkins '44, Brookfield Center
Ramirez, L. M., National Univ. '54, Fairfield
Randolph, M. F., Rochester '43, Danbury
Ranganathan, V., Madras Med. Coll. '53, Rocky Hill
Rankin, B. F., McGill '19, Hartford
Rankin, C., Nebraska '43, West Hartford
Ransome, O. J., McGill '69, Naugatuck
Raphael, M. C., Leiden '53, Southbury
Rapkin, R. M., Tufts '65, New Haven.
Rapoport, A. M., S. U. N. Y. '66, Stamford
Rapoport, L. M., N. Y. Med. Coll. '50, Milford
Rapoport, M., Cincinnati '64, Bridgeport
Rappaport, L. N., Columbia '64, Bristol
Rasmussen, H. N., Tufts '25, Montville
Rathey, U. K., Munich '53, Wallingford
Rawls, C., Med. Coll. Va. '31, Stamford

Raycroft, J. F., St. Univ. N. Y. '61, Hartford
Read, F. A., Yale '34, Riverside
Reade, E. G., Jefferson '16, Southern Pines, North Carolina (Litchfield County)
Reardon, G. E., Albany '56, Hartford
Reber, R. E., Columbia '62, Greenwich
Redlich, F. C., Vienna '35, New Haven
Redmond, A. P., Guy's Hosp. Med. Sch. '57, Greenwich
Reed, D. P., Yale '59, Waterbury
Reed, J. F., Cornell '41, Hartford
Reed, R. L., Temple '63, North Haven (Middlesex County)
Reichenbach, A. E., Tufts '38, Waterbury
Reichgut, M. H., Pennsylvania '64, Bridgeport
Reidy, J. C., George Washington '43, Winsted
Rein, J. M., Columbia P & S '63, Old Greenwich
Reinfrank, R. F., Long Island '49, Hartford
Reinhard, W. J., Jefferson '51, Southport
Reiser, M. F., Cincinnati '43, New Haven
Reiss, O., State Univ. N. Y. '51, Bristol
Reitwiesner, A. G., Long Island '38, Danbury
Rem, E. A., Long Island '47, New Canaan
Renaud, R. H., Georgetown '51, Bridgeport
Renehan, J. M., Tufts '28, Ansonia
Rentsch, J. B., Virginia '55, Glastonbury
Rentsch, S. B., Michigan '23, Derby
Rentsch, S. B., Jr., Virginia '54, Glastonbury
Rentz, R. E., Cornell '55, West Hartford
Resnick, J. S., Pennsylvania '59, Stamford
Resnik, E., McGill '30, New Britain
Resnik, H., Johns Hopkins '31, Bridgeport
Resnik, W. H., Johns Hopkins '21, Stamford
Reyelt, W. P., Jr., Med. Coll. Virginia '60, Sharon
Reynolds, J. A., Tufts '36, Waterbury
Reynolds, R. G., Harvard '26, West Simsbury
Reynolds, W. M., Columbia '31, Stonington (Fairfield County)
Rhame, H. E., Jr., George Washington '50, Fairfield
Rhinehart, J. W., N. Y. Med. Coll. '55, Newtown
Rhoades, E. J., Yale '43, New Haven
Ribner, H., Tufts '34, Bridgeport
Ricca, R. A., Pennsylvania '40, Glastonbury
Riccio, F. J., Rome '42, Bridgeport
Riccio, J. S., St. Louis '37, Middlebury
Riccitelli, M. L., Yale '22, New Haven
Rich, C. F., Pennsylvania '64, Middletown
Richar, W. J., Cornell '46, Stamford
Richards, W. R., Cornell '35, New Haven
Richman, D. P., N. Y. U. '42, South Norwalk
Richman, S. M., Washington '58, Hartford
Ridgway, W. S., Virginia '46, Stamford
Ridlon, H. C., Columbia P. & S. '58, Hartford
Riemer, H. O., Un. Innsbruck '39, Shelton (New Haven County)
Riendeau, F. M., Paris '27, Old Saybrook (Litchfield County)
Riendeau, P. L., Paris '27, Old Saybrook (Litchfield County)
Rifkin, B. G., Cape Town '54, New Haven
Rightmyer, E. R., Jefferson '55, New Haven
Rigney, B. F., Yale '67, New Haven
Rilance, A. B., McGill '31, New Haven
Riley, J. A., Yale '51, New Haven
Rimai, M. L., Bruxelles '66, Bloomfield
Rinaudo, P. A., Torino '45, Berlin (New Haven County)
Rindge, M. E., Duke' 41, Madison
Rindge, N. P., Yale '35, Clinton
Ringrose, V. P., Jr., Rochester '56, New Britain
Riordan, C. E., Harvard '63, New Haven
Riordan, W. D., N. Y. Med. Coll. '43, West Hartford (New Haven County)
Ritland, G. D., Stanford '66, Hartford
Ritter, M. E., Franfurt 50, Meriden
Roach, D. P., Nat'l Univ., Ireland '56, Shelton (New Haven County)
Roach, J. P., N. Y. Med. Coll. '58, Bridgeport
Robb, S. A., Cornell '40, Meriden
Robbins, H. M., Un. Michigan '65, La Jolla, California (Hartford County)
Robbins, J., Paris '37, Thompsonville
Robbins, K. M., Albert Einstein '67, Middletown
Roberge, G. E., Yale '38, Stratford
Roberts, D. J., Jr., Cornell '51, Manchester
Roberts, G. D., Dalhousie '60, Westport
Roberts, L. E., Un. Colorado '69, Hartford
Roberts, M. P., Yale '57, Hartford
Robertson, A. R., Temple '42, Torrington
Robertson, R. W., Albany '66, Hartford
Robins, R. J., State Univ. N. Y. '62, Westport
Robinson, A. J., Toronto '23, Madison
Robinson, C. H., Jr., Yale '60, New London
Robinson, D., Johns Hopkins '42, Hartford
Robinson, F., Cornell '42, New Haven
Robinson, J. C., Vermont '45, Hartford
Robinson, L. A., Jr., Tufts '54, Danielson
Robinson, P. D., Jr., Un. Cincinnati '62, Hartford
Robinson, W. J., Long Island '21, Christiansted, St. Croix (Hartford County)
Robison, R. C., Yale '36, Stamford
Robitaille, G. A., Tufts '60, Waterbury
Robles, M. J., Philippines '58, Bristol
Robson, M. C., Johns Hopkins '64, New Haven
Rocco, M. P., Georgetown '41, Hartford
Rocco, A. R., Naples '57, West Haven
Roch, G. E., Tufts '34, Willimantic
Rodda, T. D., Loyola Univ. '61, Greenwich
Rodriguez, J. C., Santo Domingo '52, Stafford Springs
Rofrano, D. A., Georgetown '51, Wolcott
Rogers, H. C., Columbia P. & S. '55, West Hartford
Rogers, J. F., Duke '42, Stamford
Rogers, M. C., Johns Hopkins '32, Stamford
Rogers, O. F., Jr., Harvard '12, New Haven
Rogers, R. P., Harvard '25, North Chatham, Mass. (Fairfield County)
Rogers, W. J., N. Y. U. '48, Norwalk
Rogol, L., Long Island '33, Danbury
Rogol, O., Dalhousie '32, Seymour
Rogowski, J. P., Georgetown '56, Fairfield
Roh, C. E., Columbia '41, Hartford
Roland, M., Un. Port-au-Prince '52, Rocky Hill
Romaniello, R. J., Columbia '27, Elmwood
Romeo, S. G., New Jersey '64, Manchester
Root, H. F. Jr., Tufts '55, New Britain
Root, J. H., Jr., Syracuse '43, Waterbury
Root, M. T., Cornell '18, West Hartford
Root, S. A., Cornell '19, West Hartford
Rosahn, P. D., N. Y. U. '28, New Britain
Rose, G. J., Boston Univ. '47, Rowayton
Rose, T. H., Johns Hopkins '63, Danbury
Rosen, T., Tufts '33, Manchester
Rosenbaum, G. J., Tufts '34, Hartford
Rosenbaum, H. M., Utah '48, Waterbury
Rosenbaum, H. T., State Univ. New York '57, Middletown
Rosenbaum, N., Temple '56, Bridgeport
Rosenberg, A. H., Columbia '59, Greenwich
Rosenberg, B. L., McGill '43, Stamford
Rosenberg, C. H., Buffalo '44, Stamford

Rosenberg, H. A., Vienna '37, Bridgeport
Rosenberg, J. E., Northwestern '66, Hartford
Rosenberg, M., Manitoba '55, Hartford
Rosenberg, M. A. Lausanne '54, Bridgeport
Rosenberg, M. Z., Yale '49, Willimantic
Rosenberg, P. J., Tufts '65, Norwich
Rosenberg, S., American Univ. Beirut '39, Bridgeport
Rosenbloom, M. L., N. Y. U. '60 Branford
Rosenfeld, J. E., Vienna '38, Hartford
Rosenkranz, B. M., Chicago Med. Sch. '66, West Hartford
Rosenthal, I. I., Tufts '56, Hartford
Rosenthal, M. B., Creighton '34, Hartford
Rosenthal, R. L., Long Island '38, Branford
Rosenweig, J., McGill '55, Hartford
Rosnagle, R. S., Western Reserve '57, New Haven
Rosner, F., Vienna '37, Bridgeport
Ross, S. A., Cornell '64, New Haven
Ross, W. D., State Univ. N. Y. '48, Hartford
Rossbaum, R. P. Seton Hall '62, Hartford
Rossi, J. G., Georgetown '50, New Haven
Rossi, J. P., N. Y. Med. Coll. '51, Westport
Rossi, M. A., St. Louis '62, Hartford
Rosson, R. S., Harvard '58, Hartford
Rotatori, E. S., Georgetown '58, Hartford
Roth, F. E., N. Y. U. '25, Hartford
Roth, M. S., N. Y. U. '59, Hartford
Roth, O., Vienna '37, New Haven
Roth, S., Lausanne '59, New Haven
Roth, S. Z., Vienna '36, New Haven
Rothblatt, R., Tufts '32, Willimantic
Rothstein, I., N. Y. U. '33, West Hartford
Rouman, J. C., Northwestern '53, Hartford
Rourke, T. A., Columbia '37, Greenwich
Rousseau, D. G., Vermont '45, Taftville
Roussis, K., Un. Thessaloniki, Greece '58, Hartford
Rozen, A. A., Yale '37, Hamden
Rubin, A., Geneva '29, Hartford
Rubin, A. A., Utah '48, New Haven
Rubin, L. R., Syracuse '58, Danbury
Rubin, M. L., Harvard '61, Manchester
Rubinow, M. B., Long Island '42, Manchester
Ruby, M. H., Columbia '21, Waterbury
Ruby, R. J., Baylor '36, Waterbury
Rucker, L. G., Meharry '49, Storrs (Windham County)
Ruiz, R. R., Havana '43, Danbury
Rup, E. C., Georgetown '43, West Hartford
Rusch, O. F., Un. Munich '64, Bridgeport
Russell, B. I., St. Andrew's Scotland '58, Meriden
Russell, D. G., Tufts '54, Bristol
Russell, G. G., Harvard '19, Hartford
Russell, T. H., Yale '10, Hamden
Russell, W., St. Andrew's Scotland '57, Meriden
Russman, C., Tufts '23, Hallandale, Florida (Middlesex County)
Russo, C. G. Hahnemann '58, Waterbury
Russo, J. N., Vermont '45, Hartford
Russo, J. R., Columbia '43, Bridgeport
Russo, R. D., Georgetown '43, Bridgeport
Rutherford, J. W., Tufts '53, New Canaan
Ryan, F. J., Tufts '35, West Hartford
Ryan, J. E., Albany '48, Easton
Ryan, J. J., Columbia '41, Stamford
Ryan, S. J., Columbia '47, Waterbury
Ryan, V. G., Yale '34, Portland
Ryan, W. A., McGill '45, Stamford
Ryan, W. D., N. Y. Medical '53, Wethersfield
Ryan, W. F., Jr., Tufts '47, Hartford
Saccio, J. D., Yale '59, New Haven
Sacco, J. J., Loyola '55, Norwalk
Sachs, J. J., N. Y. U. '40, Hartford
Sacks, H. S., Cornell '52, New Haven
Sadowski, J. S., Georgetown '55, Hartford
Safford, T., Jr., Long Island '47, Ridgefield
Saidel, J. W., Chile '38, Bridgeport
St. James, A. T., Long Island '44, Wallingford
St. John, L. A., Fordham '20, Hartford
St. John, N. E., George Washington '48, Wethersfield
Salerno, N. R., Jefferson '64, Hartford
Salerno, S. A., Georgetown '59, Greenwich
Salinger, R., Johns Hopkins '25, New Haven
Saltzman, M., Berne, Switzerland '58, Plainville
Saltzman, S. H., State Univ. N. Y. '51, Hartford
Samponaro, N., Johns Hopkins '29, Torrington
Samson, D. P., Columbia '43, Thomaston
Samson, D. W., New Jersey '63, New Britain
Samuels, J. D., Duke '67, Derby
Samuelson, A. W., Tufts '48, Bridgeport
Sandler, G., Tulane '50, Willimantic
Sandler, M. J., Tulane '55, Willimantic
Sandulli, G. R., Tufts '29, Watertown (New Haven County)
Sangree, M. H., Jr., Cornell '59, Waterbury
Sansing, J. G., Yale '66, Torrington
Santagata, P. W., Georgetown '55, Stamford
Santella, S. M., Creighton '57, Bridgeport
Santiccioli, A. B., Bologna '40, Norwich
Santopietro, O. O., N. Y. Med. Coll. '48, Waterbury
Santoro, G. M., Cornell '24, Prospect
Saperstein, S., Chicago '60, Newtown
Saracco, F. P., Catholic Un. Belgium '66, Hamden
Saracino, L., Bari '44, Norwich
Saraczynski, D. L., Zurich '56, Bridgeport
Sasaki, C. T., Yale '66, New Haven
Sataline, L. R., Bologna '56, Cheshire
Satlof, D. M., Emory '61, Hartford
Saunders, F. P., Boston '58, Danbury
Saunders, G. R., Cornell '41, Old Saybrook
Saunders, W. L., Rochester '49, Elmwood
Sava, G. A., Ottawa '57, Stamford
Savak, J. E., Boston '45, Springdale
Savin, R. C., Florida '61, New Haven
Savin, S., Vermont '45, Bridgeport
Savitsky, E., N. Y. C. '41, Stamford
Sawicki, L. A., Boston '48, Wallingford
Sawyer, J. D., Vermont '44, Norwich
Sax, R. E., Western Ontario '63, Bridgeport
Saxe, L. P., Kansas '46, New London
Sayers, D. O'C., Tufts '35, Waterbury
Sayers, J. H., Tufts '56, Hartford
Sayers, J. J., Tufts '35, Hartford
Scalice, R. A., N. Y. Med. Coll. '67, Torrington
Scalzi, L. C., Bologna '37, Bridgeport
Scavo, V. J., N. Y. U. '58, Bridgeport
Schapira, H. J., Univ. Geneva '62, New Haven
Schardt, W. M., N. Y. U. '45, Manchester
Schare, G. D., Med. Coll. Virginia '67, Bridgeport
Schatten, S. S., N. Y. U. '31, West Hartford
Schear, W. A., N. Y. Med. Coll. '54, Thompsonville
Schechtman, C. T., Vermont '26, New Britain
Scheer, C. W., Stanford '56, Meriden
Scheer, E. H., Tufts '45, New Britain
Scherr, E. S., Geneva '57, Branford
Scheig, R. L., Yale '56, Newington (New Haven County)
Scherr, E. H., Med. Coll. Va. '46, New Haven
Scheuer, A. Q., Yale '68, Branford
Schioppo, D. B., Seton Hall '63, New Haven
Schlessel, T. E., Rochester '55, Hamden

Schloss, W. A., N. Y. U. '40, Hartford
Schmidt, C. W., Buenos Aires Un. '57, New London
Schmidt, J. L. West Virginia '64, Mystic
Schmiedeck, A. A., Vienna '49, Weston
Schmitt, D., Physicians & Surgeons '54, Old Greenwich
Schmoll, R. D., Pennsylvania '57, Bloomfield
Schnap, I., Long Island '29, Hartford
Schneidau, P. B., N. Y. U. '58, Stamford
Schneider, R. G., N. Y. U. '56, Westport
Schneider, W., George Washington '30, Rockville
Schoenwald, H. R., Georgetown '58, Darien
Scholan, F. J., Tufts '55, Southport
Scholand, J. F., Harvard '66, New Britain
Scholhamer, C. F., Yale '42, Hamden
Scholl, R. F., Yale '12, New Haven
Scholz, H. D. Breslaw '51, New London
Schopick, L. E., Zurich '35, Bridgeport
Schowalter, J. E., Wisconsin '60, New Haven
Schreiber, S. J., Chicago '58, New Haven
Schreuder, O. B., Oregon '24, Marlborough
Schrier, R. I., Chicago '52, New Haven
Schubert, A. S., Georgetown '64, Avon
Schulman, P. L., St. Univ. New York '58, Norwalk
Schultz, M., N. Y. U. '43, Westport
Schupack, S. D., Tufts '24, New Britain
Schurgast, A. W., Cincinnati '45, Meriden
Schuster, C. L., N.Y.U. '64, New Canaan
Schuster, H. S., N. Y. U. '64, West Hartford
Schwartz, A. H., N. Y. U. '58, New Haven
Schwartz, A. J., Columbia '59, Stamford
Schwartz, G. L., Cincinnati '67, Rockville
Schwartz, H., Colorado '43, Chicago, Illinois (Hartford County)
Schwartz, H. N., Med. Coll. Virginia '37, Hartford
Schwartz, L., Tufts '57, Hartford
Schwartz, M. D, Yale '59, New Haven
Schwartz, P. E., Tufts '31, Middletown
Schwartz, P. E., S. U. N. Y. '60, Norwalk
Schwartz, R. D., State Univ. Brooklyn '52, Danbury
Schwartz, S. S., Tufts '46, New Haven
Schwarz, H. P., Vienna '38, Norwich
Schwartzberg, S. G., Dalhousie '65, New London
Schweizer, R. T., Tufts '64, Hartford
Schwimmer, R., Temple '49, Greenwich
Sciarrillo, J. J., Stritch School of Medicine '50, Bridgeport
Scoville, W. B., Pennsylvania '32, Hartford
Scudder, W. T., Physicians & Surgeons '55, Simsbury
Sculco, M. J., Boston '60, Norwich
Scull, E., Jefferson '48, Hartford
Scully, H. F., N. Y. Med. Coll. '56, West Hartford
Scully, M. R., Columbia '41, Bridgeport
Scully, R. T., Georgetown '35, New Britain
Sears, L., Harvard '29, Norwich
Secor, R. C., Upstate Med. Ctr. '39, Hartford
Segall, E. M., Howard '58, Waterbury
Segel, S., Vermont '35, Norwich
Seguljic, N. J., Georgetown '55, Bristol
Seibert, A. F., Yale '27, Berlin
Seide, M. J., Chicago '53, Hartford
Seigle, S. P., Harvard '40, Hartford
Sekerak, R. J., Maryland '34. Bridgeport
Selcow, J. E., Vermont '59, Hartford
Seligson. D., Utah '46, New Haven
Sellner, H. A., Columbia '67, Danbury
Selsky, L. M., Johns Hopkins '65, Bristol
Selzer, R. A., Albany '53, New Haven
Semmelmeyer, J. A. III, Washington '58, Westport
Senn, M. J. E., Wisconsin '27, New Haven
Sennett, E. J., Vermont '43, Hartford
Serbin, A. F., Rush '33, Hartford
Sereda, L. E., Toronto '53, Bloomfield
Serena, F. A., Hahnemann '40, Norwalk
Serena, J. M., Hahnemann '41, Norwalk
Serrell, H. P., Cornell '32, Greenwich
Shafer, M. E., Pennsylvania '50, Hartford
Shafto, W. A., Edinburgh '60, Danbury
Shah, U. C., Grant Med. Coll. '50, Bridgeport
Shakibai, A., Tehran Un. '65, Manchester
Shanahan, S. A., Med. Coll. Pennsylvania '69, Greenwich
Shanley, W. T., N. Y. Med. Coll. '61, Bridgeport
Shapiro, B. S., Buffalo '57, Ansonia
Shapiro, H. I., Chicago '63, Westport
Shapiro, H. O., Alabama '63, Rockville
Shapiro, R., Pennsylvania '39, New Haven
Sharian, K. E., Teheran Un. '57, Waterbury
Sharon, H. J., Berne '58, New Britain
Sharon, M. R., Seton Hall '62, Rockville
Shaw, L. E., Wom. Med. Coll. Pa. '22, New Preston (Fairfield County)
Shaw, R. C., Chicago '47, Hartford
Shea, J. P., N. Y. U. '46, Bridgeport
Shea, M. S., Vermont '21, New Haven
Shea, V. T., Tufts '31, Waterbury
Shea, V. T., Jr., Nat'l. Un. Ireland '65, Waterbury
Shealy, A. C., Boston '58, Waterbury
Sheard, C., Toronto '39, Stamford
Shearer, J. K., Albany '43, Waterbury
Sheehan, B. F., Indiana '66, Old Saybrook
Sheehan, F. G., Queen's Univ Belfast '55, Middletown
Sheehan, G. D., Un. Coll. Dublin '65, Hartford
Sheehan, J. E., Long Island '47, Ridgefield
Sheftell, F. D., N. Y. Med Coll. '66, Stamford
Sheiman, R. A., Michigan '64, Bridgeport
Sheiman, S. C., Michigan '40, Bridgeport
Shelling, R. L., Boston '56, Milford
Shelton, P. A., N. Y. Univ. '57, Hartford
Shenker, B. M., N. Y. Med. Coll. '38, Middletown
Shepard, W. M., Columbia '29, Putnam
Sherlip, B. J., N. Y. Med. Coll. '55, Trumbull
Sherman, B., George Washington '29, Middletown
Sherman, I. J., Johns Hopkins '40, Bridgeport
Sherman, J. A., Chicago '67, Waterbury
Sherman, R. B., Yale '58, Winsted
Sherman, S. H., Columbia '34, Stamford
Sherman, S. H., Cornell '32, Simsbury
Sherman, W. T., N. Y. U. '60, Danbury
Sherpick, W. E., Columbia '48, Farmington
Sherrington, H. J., Nat'l. Un. Mexico '63, Stamford
Sherwin, C. P., Jr., Columbia '43, Meriden
Sherwood, H., N. Y. Med. Coll. '37, Middletown
Sherwood, P. M., Boston '42, Hartford
Shetty, S. M. B., G. S. Med. Coll. '63, Bridgeport
Shiffman, I., St. Univ. New York '59, Meriden
Shiller, J. G., Columbia '52, Westport
Shimkin, P. M., Pennsylvania '65, Bridgeport
Sholler, N. A., Hahnemann '43, Bridgeport
Shoukimas, J., Harvard '42, Hartford
Shoup, H. B., Jr., Indiana '35, Westport
Shull, J. C., Harvard '36, Hartford
Shure, A. L., Tufts '27, New Haven
Shutkin, N. M., Northwestern '37, New Haven
Shutkin, P. M., Cornell '60, New Canaan
Sicklick, E., Geneva '51, Hartford
Siderides, C. I., Athens '52, Stamford
Siderides, L. E., Athens '52, Stamford
Siefert, F. E., N. Y. Med. '60, Old Greenwich
Siegel, B. S., Cornell '57, New Haven

Siggins, L. D., Univ. Melbourne, Australia '59, New Haven
Sigman, R. L., Harvard '66, Hartford
Sikand, S. D., Punjab '49, Willimantic
Siker, E., Women's Med. Pa. '43, Hartford
Sikorski, J. J., Basel '57, Derby
Silberman, C. G., Jefferson '50, Westport
Silbermann, S. J., Vienna '36, Hartford
Silberstein, A. B., Downstate Med. Coll. '62, Middletown
Silberstein, M. H., Berne '55, New Haven
Silliman, W. B., Jefferson '46, Windsor
Sillman, E., Columbia '48, Meriden
Silva, H. R., San-Marcos Un. '62, New Haven
Silver, G. A., Jefferson '38, New Haven
Silver, H., Buffalo '57, Hartford
Silver, S. E., Columbia '62, New London
Silverberg, S. J., Columbia '21, New Haven
Silverman, D. R., St. Louis '63, Bridgeport
Silverman, J. P., N. Y. U. '65, New Haven
Silverman, N. R., N. Y. U. '64, Hamden
Silverstein, D. M., Wayne State '59, Derby
Silverstein, H. R., Ohio State '65, Hartford
Silvert, D. S., Manitoba '52, Danbury
Simkovitz, J., Havana '52, Bridgeport
Simmons, E. M., Yale '23, Newington
Simon, H. J., Colorado '43, Waco, Texas (Fairfield County)
Simon, L. G., N. Y. U. '27, Norwalk
Simonds, J. R., Vermont '38, Washington Depot
Simonelli, J. M., Bologna '58, Danbury
Simpson, J. A., Georgetown '60, Bridgeport
Simses, J. P., Tufts '37, Bridgeport
Singer, B., N. Y. Med. Coll. '61, Norwalk
Singer, J. B., Yale '66, Norwalk
Sinton, W. A., Boston '46, Danbury
Sires, W. O., Maryland '50, Fairfield
Sirica, A. E., Johns Hopkins '26, Waterbury
Sirkin, R. B., Harvard '55, New Britain
Sirop, P. A., Brussels '58, Waterbury
Sirot, G., State Univ. of N. Y. '51, New Haven
Sirota, H. H., Cambridge '37, East Hartford
Sklaire, M. W., N. Y. U. '60, Madison
Sklaver, J., Michigan '37, Waterbury
Skluth, L. H., N. Y. U. '36, Norwalk
Skreczko, C. K., Jefferson '37, New Haven
Slater, D., N. Y. Med. Coll. '40, Hamden
Slater, G., Vienna '38, Stamford
Slater, G. S., N. Y. Med. Coll. '44, New Britain
Slater, M., Yale '24, Hamden
Slossberg, D. S., Tufts '34, Bloomfield
Slover, W. P., Jr., Boston '60, Hartford
Slysz, L. B., Boston '27, New Britain
Small, A. R., N. Y. Med. Coll. '48, Bridgeport
Small, J. H., New York '54, Bridgeport
Smeraldi, R. A., Ottawa '59, Stamford
Smiley, S. S., St. Un. New York '59, Ansonia
Smith, D. B., Yale '58, Wallingford
Smith, D. H., Syracuse '53, Manchester
Smith, E. R., Yale '40, Meriden
Smith, F. E., Jr., Columbia '34, Salisbury
Smith, F. F., Howard '30, New Haven
Smith, F. M., Vermont '11, Willimantic
Smith, H. E., Columbia '15, Middlefield
Smith, H. W., Yale '53, New Haven
Smith, J. A., Western Reserve '35, Waterbury
Smith, J. D., Lausanne '62, West Hartford
Smith, J. J., Maryland '30, Easton
Smith, J. R. V., Pittsburgh '60, Hartford
Smith, J. T., Long Island '41, Torrington
Smith, L. A., Albany '43, West Hartford
Smith, L. K., Univ. of Rochester '44, Hartford
Smith, L. M., Tufts '37, Stamford
Smith, N. E., Jr., Med. Coll. Virginia '66, Winsted
Smith, R. D., McGill '54, Torrington
Smith, R. P., Harvard '43A, Cheshire
Smith, S. G., Rochester '62, Manchester
Smith, W. F. Cornell '34, West Hartford
Smith, W. L., Columbia '37, Hartford
Smolen, E. M., N. Y. U. '44, Fairfield
Smolen, R. L., N.Y.U. '50, Fairfield
Snoke, A. W., Stamford '33, Hamden
Snow, B., Tufts '57, New Haven
Snurkowski, C. V., Georgetown '25, New Haven
Snyder, H. L., Chicago '54, Manchester
Soares, M. J., N. Y. Med. Coll. '57, Hartford
Sokhos, D. R., Nat'l. Un. Athens '48, North Haven
Sokolski, E. J., Maryland '45, Danbury
Solano, H., Nat'l. Un. Mexico '66, New Britain
Soletsky, H. B., N. Y. U. '62, Brookfield
Solitare, G. B., Yale '57, New Haven
Sollosy, A., Tufts '27, Pompano Beach, Florida
Solomon, C. I., Yale '25, Hartford
Solomon, M., Michigan '56, Norwich
Solomon, R. Z., Yale '39, Hartford
Solway, R. I., Toronto '40, Westport
Somogyi, B. B., S.U.N.Y. '65, Southington
Son, Y. H., Seoul Nat'l. Un. '50, New Haven
Songco, M. F., Philippines '54, Norwich
Sonnen, V. G., Basel '46, Hazardville (Tolland County)
Soreff, L., Tufts '32, East Hampton
Sorge, D. V., St. Louis '59, Bridgeport
Soriano, E. R., Philippines '52, Groton
Sornberger, C. F., Syracuse '40, Hampton
Sosa, J. B., Santo Domingo '59, Middletown
Southwick, W. O., Nebraska '47, New Haven
Souvlis, C. D., Nat'l. Athens '47, Bridgeport
Spalding, P. E., London Univ. '53, Portland
Spannaus, F. C., Jr., N. Y. U. '45, Roxbury (Fairfield County)
Spector, N., Tufts '24, Willimantic
Speer, C. S., Hahnemann '55, Hartford
Speight, H. E., Georgetown '27, Middletown
Spekter, L., Rochester '33, Hartford
Spence, J. K., Pittsburgh '54, Ridgefield
Spencer, J. A. E., Yale '62, Greenwich
Spencer, L. O., Tulane '26, Myrtle Beach, South Carolina (New Haven County)
Spencer, S., Georgetown '39, Fairfield
Spencer, S. B., N. Y. U. '41, Torrington
Spicuzza, T. J., Med. Coll. Va. '64, Woodbury (New Haven County)
Spignesi, J. T., Georgetown '30, Wallingford
Spillane, R. J., Washington '43, Hartford
Spinelli, N. P. R., Yale '44, Devon (Fairfield County)
Spinner, S., Tufts '35, New Haven
Spiro, H. M., Harvard '47, New Haven
Spitz, H., Yale '43, New London
Sponzo, J. J., Tufts '38, Hartford
Sprafke, D. F., Georgetown '63, New London
Sprecace, G. A., State Univ. New York '57, New London
Springer, G. L., Yale '68, Norwich
Sproul, L. E., Harvard '58, Mystic
Squattrito, U., Palmero '52, Darien
Squillacote, V. J., Rome '34, New Britain
Sreenivas, V. I., Govt. Med. Coll. Mysore '61, Orange
Srinivas, R. R., Prince of Wales '63, New London
Srinivasan, J. P., Christian Med. Coll., India '64, Bloomfield
Stabenau, J. R., Marquette '55, Hartford
Stabinsky, C., New York '55, Norwalk
Stack, W. J., N. Y. Med. Coll. '48, Hartford

Staffieri, S., Naples '44, Danbury
Stallworth, V. M., Meharry '59, Bridgeport
Standard, J. E., Syracuse '43, Waterbury
Standish, E. M., Harvard '22, West Hartford
Standish, H. C., Cornell '28, West Hartford
Standish, W. A., Yale '25, Avon
Stanford, J., Harvard '51, Essex
Stankard, W. F., Jefferson '38, Stamford
Stanton, R. E., Boston '55, Manchester
Stapor, J. J., Long Island '47, Orange (Hartford County)
Starr, R. M., Yale '26, Quaker Hill
Stathacos, E. J., North Carolina '57, Fairfield
Stavola, J. J., New York '56, Hartford
Stearns, C. S., Yale '46, East Hartford
Steckler, J. B., St. Un. New York '66, New Britain
Steege, T. W., Yale '38, Hartford
Steglich, C. P., Univ. Columbia '48, Stamford
Stein, M. L., N. Y. Univ. Coll Med. '59, Milford
Stein, S. A., Harvard '67, New Haven
Stein, S., Albert Einstein '66, Westport
Stein, S. C., Un. Virginia '56, New London
Steinberg, D. H., St. Univ. New York '59, Stamford
Steinberg, H., N. Y. Med. '54, Westport
Steinberger, L., Royal Hungarian Eliz. '37, Norwalk
Steincrohn, P. J., Maryland '23, Coral Gables, Florida (Hartford County)
Steinhacker, R., Rochester '63, Hartford
Steinmayer, O. C., Jr., Tulane '50, Bristol
Steller, R. E., Temple '53, Stamford
Stember, R. H., N.Y.U. '59, Norwalk
Stent, P. A., Georgetown '54, Hartford
Steremberg, Z, San Marcos Un. '63, Bridgeport
Stern, H., Tufts '52, New Haven
Stern, P. G., Med. Coll. Virginia '69, Hartford
Stern, S., St. Univ. of New York '57, New Haven
Sterrett, R. A., Cornell '39, Southport
Stetson, H. P., Boston '41, Southington
Stetson, H. W., Vermont '06, Milford
Stettbacher, H. J., Harvard '22, Cambridge, Maryland (New Haven County)
Steven, R. J. M., London '43, Hartford
Stevens, J. G., Maryland '41, Bridgeport
Stewart, L. Q., Yale '33, South Yarmouth, Mass. (Hartford County)
Stewart, W. E. L., Albany '52, New Britain
Stier, S. D., N. Y. Med. '61, Derby
Stietzel, E. E., Columbia '34, Norwalk
Stiff, D. P., Michigan '56, Bridgeport
Stilson, C., Yale '42, New Haven
Stoane, L., Downstate Med. Ctr. '60, Middletown
Stocking, A. G., Long Island '46, Waterbury
Stockwell, R. M., Tufts '56, Farmington
Storms, W. F., Harvard '30, Wethersfield
Stotts, H. L., Un. Washington '52, Bridgeport
Strauch, G. O., Michigan '57, Stamford
Strayer, L. M., Jr., Harvard '30, Lancaster, New Hampshire (Fairfield County)
Strazek, L. M., Wroclaw '60, Wallingford
Street, J. M., Duke '42, New Milford
Streeto, J. M., Pennsylvania '60, Hartford
Strong, S. G., Manitoba '45, Norwalk
Stroup, R. F., Rochester '65, New Haven
Stubenhaus, J. H., N. Y. Med. Coll. '47, Fairfield
Stuermer, V. M., Nebraska '48, New Haven
Sturman, R. H., Yale '50, Waterbury
Suerig, K. C., New York-Bellevue '61, Cos Cob
Suesserman, H. I., George Washington Univ. '64, Waterbury
Sulick, E. J., Georgetown '54, Manchester
Sullivan, A. F., Jefferson '42, Waterbury
Sullivan, C. N., McGill '30, New Britain
Sullivan, J. J., Jr., Tufts '55, Stamford
Sullivan, J. L., Yale '51, Bridgeport
Sullivan, R. E., Georgetown '63, Waterbury
Sullivan, R. M., Tufts '59, East Hartford
Sullivan, T. J., Yale '17, Boca Raton, Florida (New Haven County)
Sullivan, W. M., New York '54, Norwalk
Sulman, M., Columbia '36, New London
Sultar, R. S., State Univ. N. Y. '57, Kensington
Summa, J. F., New York Med. Coll. '58, Waterbury
Sumner, M. L., N. Y. Med. Coll. '47, New Haven
Sumner, P. E., Tufts '55, Manchester
Sunderman, F. W., Jr., Jefferson '55, Farmington
Sundquist, A. B., Tufts '33, Manchester
Suplicki, J. W., Tufts '26, Norwich
Sussler, D., Fordham '16, Norwich
Suttenfield, V., Georgia '44, Stamford
Sutton, P., Vienna '36, Groton
Sutula, S. J., Jr., Jefferson '65, Hartford
Svedlow, B. D., George Washington '41, Stamford
Swain, E. B., Cornell '51, Hartford
Swan, B. R., Cornell '43, New Haven
Swarts, W. B., Pennsylvania '34, Greenwich
Swartz, G. J., Ottawa '65, New Britain
Sweet, A. N., Maryland '18, Middletown
Sweet, E. B., Virginia '50, Hartford
Sweet, R. T., State Univ. N. Y. '52, Middletown
Swett, N. P., N. Y. U. '46, Hartford
Swift, D. B., Harvard '62, Lakeville
Swift, W. E., Columbia '40, New Haven
Swirsky, M. Y., N. Y. Med. Coll. '39, New Haven
Syz, H., Geneva '21, Westport

Tadeo-Goldman, J. A., Santo Tomas '53, Hartford
Taffel, M., Yale '31, New Haven
Tager, M. G., N. Y. Med. Coll. '58, Norwalk
Talbot, H. P., Maryland '27, Venice, Florida (Hartford County)
Tan, D. L., Univ. of Groningen '57, Meriden (New London County)
Taubin, H. L., Un. Virginia '65, Bridgeport
Taylor, D. M., N. Y. U. '47, New Britain
Taylor, J. K., Ottawa '64, Danbury
Taylor, K. S., Arkansas '60, Norwich
Taylor, M. J., Columbia '63, Southbury
Taylor, P. T., Temple '62, Hartford
Taylor, R. F., Ohio '58, Glastonbury
Taylor, R. M., George Washington '22, East Haven
Taylor, R. N., Yale '30, New London
Taylor, S. P., George Washington '16, North Haven
Taylor, W. R., Columbia '60, New Britain
Teahan, J. W., McGill '39, West Hartford
Tec, L., St. Joseph's '44, Westport
Tehrani, H. L., Tehran '62, Manchester
Teiger, P., Columbia '39, Waterbury
Telfeian, A., French '52, Stamford
Tella, R. T., Tufts '45, Stamford
Tennant, R., Yale '29, Hartford
Terhune, W. B., Tulane '15, New Canaan
terKuile, R. C., Rochester '32, Lebanon, Illinois (Fairfield County)
Tesoro, M. R., New York Med. Coll. '67, Sharon
Teuscher, W. P., Tufts '32, Annapolis, Maryland (Fairfield County)
Thalberg, R. E., Yale '26, Southington
Thaw, B. D., George Washington '48, Hartford
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Golino, Mrs. Emanuel F., 111 Holland La. 06118
Sirota, Mrs. Harvey H., 564 Forest 06118
Trantolo, Mrs. Arthur, 64 Holland Lane 06118

EAST HARTLAND 06027

Birge, Mrs. Henry L., Box 158

ELLINGTON 06029

Cameron, Mrs. Ian, 44 Abbott Rd.

ENFIELD 06030

Figueroa, Mrs. Francisco, 264 Hazard Ave.
Gourlie, Mrs. Howard, 75 North Main
Johnson, Mrs. Carl W., 1033 Enfield

FARMINGTON 06032

Belkin, Mrs. Joseph, 58 Dorset La.
Browne, Mrs. Harry H., 26 Dorset La.
Carignan, Mrs. Roland, 26 Lake Shore Dr., Apt. B1
Cooke, Mrs. Ronald W., 3 Willow La.
Dunn, Mrs. Morris L, 729 Farmington Ave.
Gibson, Mrs. Forrest D., 8 White Oak Rd.
Huszar. Mrs. Robert J., 21 Poplar Hill Drive
Klatsky, Mrs. Alan Usher, 8 Candlewood La.
Linnolt, Mrs. Erik, 3 Pinnacle Ridge Rd.
Owens, Mrs. Guy, 41 Main
Perovic, Mrs. Milos, 2 Great Meadow La.
Pike, Mrs. Maurice M., Old Mountain Rd.
Schuster, Mrs. Harvey S., 3F Earls Ct., Talcott Village
Smith, Mrs. Jay R. V., 6 Parish Rd.

GLASTONBURY 06033

Bernavides, Mrs. Carlos, 325 Cedar Ridge Dr.
Donovan, Mrs. James F., 60 Overlook Dr.
Drury, Mrs. Robert, 83 Elm Tree Rd.
Golub, Mrs. Grant, 45 Brookhaven Dr.
Griswold, Mrs. Edwin M., 2869 Main
Hamlin, Mrs. Charles H., 2079 Main
Knights, Mrs. William, 19 Coach Rd.
Leicach, Mrs. Mario, Millstone Rd. R.F.D. 3
Lohman, Mrs. William H., 1197 Main
Palma, Mrs. Joseph, 435 Woodhaven Rd.
Robinson, Mrs. John, 84 S. Hollister
Rossbaum, Mrs. Robert, 289 Three Mile Rd.
Slover, Mrs. William P., Jr., 110 Natchaug Dr.

HARTFORD

Allport, Mrs. Vernon G., 85 Terry Rd. 06105
Beizer, Mrs. Edmund, 31 Woodland, Apt. 75 06105
Bellizzi, Mrs. Joseph, 114 North Beacon 06105
Brandon, Mrs. Kenneth F., 128 North Oxford 06105
Carangelo, Mrs. John, 234 North Beacon 06105
Cobb, Mrs. Richard J., 50 Canterbury 06112
Cramer, Mrs. Sidney L., 75 Westerly Ter. 06105
D'Alotto, Mrs. John A., 35 Oxford 06105
DePasquale, Mrs. Francis L., 1990 Broad 06114
Dilligan, Mrs. Frances, 31 Woodland 06105
Dion, Mrs. Julien A., 152 Fairfield Ave. 06114
Doerr, Mrs. William J., 690 Prospect Ave. 06103
Foohey, Mrs. Fleur C., 165 Scarborough 06105
Foster, Mrs. James H., 75 Terry Rd. 06105
Geetter, Mrs. Isidore S., 92 Fern 06105
Katz, Mrs. Dewey, 30 Woodland 06105
Kosar, Mrs. Walter P., 39 Woodside Circle 06105
Lankin, Mrs. Joseph J., 71 Scarborough 06105
McNulty, Mrs. T. F., 22 North Beacon 06105
O'Connell, Mrs. Thomas J., 108 Bloomfield Ave. 06105
Pizzo, Mrs. Paul S., 660 Wethersfield Ave. 06114
Powers, Mrs. Edward, 104 Terry Rd. 06105
Rocco, Mrs. Mario P., 500 New Britain Ave. 06106
Solomkin, Mrs. Mark, 107 Westerly Ter. 06105
Tonken, Mrs. Louis C., 50 Harwich 06114
Uricchio, Mrs. Joseph G., 380 Linnmoore 06105
Worthen, Mrs. Thatcher W., 183 Bloomfield Ave. 06105

KENSINGTON 06037

Clapp, Mrs. Paul, 239 Butternut La.
Koch, Mrs. Lawrence W., 118 Warner Rd.
Waskowitz, Mrs. David, 30 Blue Ridge La.

MANCHESTER 06040

Barrett, Mrs. Harold S., 120 Lakewood Circle
Charendoff, Mrs. Leo, 135 Steephollow Lane
Danyliw, Mrs. Joseph M., 43 Forest
Diskan, Mrs. A. Elmer, Box 371, R.D. 3
Donovan, Mrs. Thomas J., 100 Westland, R.D. 3, Box 285
Jacobson, Mrs. Charles E., Jr., 45 Wyllys
Karns, Mrs. Robert E., 61 Plymouth La.
Kim, Mrs. Cyril K., 62 Wynding Hill Rd.
Lehmus, Mrs. Harold J., 161 Blue Ridge Dr.
Malone, Mrs. H. John, 84 Prospect
Miller, Mrs. Gerald R., 71 Boulder Rd.
Pastel, Mrs. Harvey, 646 Porter
Rubinow, Mrs. Merrill, 68 Butternut Rd.
Snyder, Mrs. Herbert L., 47 Highwood Dr.
Sundquist, Mrs. Alfred B., Box 374, R.D. 3
Tehrani, Mrs. Hossein, 35 Shallow Brook La.
Warren, Mrs. David L., 40 Highwood Dr.
Woolpert, Mrs. Keith D., 55 Highwood Dr.

MARLBOROUGH 06424

Schreuder, Mrs. Otis B., South Rd., R. D. 2, East Hampton

MILLDALE 06467

Dudac, Mrs. Thomas, 120 Clark

NEW BRITAIN 06052

Bayer, Mrs. Alexander, 26 Brookside Rd.
Bernstein, Mrs. Abraham, 93 Adams
Clarke, Mrs. Harold M., 746 Corbin Ave.
Formica, Mrs. Joseph J., 60 Wightman Rd.
Mondell, Mrs. Julian, 40 Hart
Peck, Mrs. Bernard C., 32 Park Pl.
Schectman, Mrs. Charles, 62 Dover Rd.
Tisher, Mrs. Paul Winslow, 389 Shuttle Meadow Ave.
Waskowitz, Mrs. William J., 184 Hickory Hill Rd.
Wesoly, Mrs. Andrew S., 27 Grove Hill

NEWINGTON 06111

Callahan, Mrs. James L., 512 Main
Clark, Mrs. Isaiah, 162 Winslow Dr.
Friedberg, Mrs. I. H., 154 Cedarwood Lane
Levreault, Mrs. Gerald V., 22 Elton Dr.
O'Neil, Mrs. Vincent D., 72 Southwood Rd.
Pulaski, Mrs. John E., 1803 Main
Wolfson, Mrs. Herman, 23 Ivy Lane

PLAINVILLE 06062

Iannotti, Mrs. John P., "Sharpenhoe," Red Stone Hill
Yannios, Mrs. James N., Red Stone Hill

ROCKVILLE 06066

O'Connor, Mrs. Luke E., 24 Ellington Ave.

ROCKY HILLL 06067

Menelick, Mrs. Roland, Veteran's Home

SIMSBURY 06070

Bartlett, Mrs. Raymond C., 6 Pinecrest Dr.
Carpentieri, Mrs. Joseph, 17 Hap Hollow Rd.
Cooper, Mrs. Paul A., 72 Climax Rd.
Gainter, Mrs. John R., 4 Westridge Dr.
Steinhacker, Mrs. Robert, 19 Sanctuary Dr.

SOUTHINGTON 06489

Blumer, Mrs. Arthur, Castleman Dr.
Thalberg, Mrs. R. E., 80 Oakland Rd.

SOUTH GLASTONBURY 06073

Kelly, Mrs. Donald, 163 Dayton Rd.
Raycroft, Mrs. John T., Cotton Hollow

SOUTH WINDSOR 06074

Gutowski, Mrs. Thaddeus J., 176 Oak

VERNON 06086

Fogg, Mrs. Lyman B., 31 Irene Dr.
Roberts, Mrs. Douglas J., Jr., Bolton Rd., R. F. D. 1

WEST HARTFORD

Alden, Mrs. John O., 15 Peaslee Hill 06107
Alderman, Mrs. M. Y., 16 Lakeview Dr. 06117
Alisberg, Mrs. Norman, 10 Deepwood La. 06107
Allen, Mrs. John C., 89 Waterside La. 06107
Allen, Mrs. Roy, 209 Sedgwick Rd. 06107
Alter, Mrs. Burton N., 38 Tumble Brook La.
Amato, Mrs. Joseph A., 720 Farmington Ave. 06119
Amato, Mrs. Peter R., 8 Timrod Lane 06107
Anderson, Mrs. Albin S., 17 Drury Lane 06117
Anderson, Mrs. Gustave W., 30 Clark Dr. 06117
Andrews, Mrs. Ezra, 21 West Normandy Dr. 06107
Antupit, Mrs. Louis, 9 Crossways 06117
Austin, Mrs. Lawrence, 9 West Hill Dr. 06119

Babcock, Mrs. Albert L., 75 Uplands Dr. 06107
Baltrucki, Mrs. Henry C., 10 Berwyn Lane 06107
Barbour, Mrs. Charles M., 7 Wingate Lane 06107
Bendett, Mrs. Rodman, 109 Highwood Rd. 06117
Berlin, Mrs. Bert B., 55 Uplands Dr. 06107
Blechner, Mrs. Jack N., 142 Westmont 06117
Book, Mrs. Donald T., 334 Ridgewood Rd. 06107
Borden, Mrs. Walter A., 37 Candelwood Dr. 06117
Boren, Mrs. Charles, 21 Mountain View Dr. 06117
Bowen, Mrs. Francis, 46 Sedgewick Rd. 06107
Bowers, Mrs. George N., Jr., 136 Whiting Lane 06119
Braceland, Mrs. Francis J., 43 Ledyard Rd. 06117
Bradley, Mrs. Donald F., Jr., 59 West Hill Dr. 06119
Brewster, Mrs. William B., Jr., 20 Northfield Rd. 06107
Bronson, Mrs. William R., 49 Smallwood Rd. 06107
Brown, Mrs. Donald, 30 Claybar Dr. 06117
Brown, Mrs. Louis, 136 Mohawk Dr. 06117
Brown, Mrs. Richard B., 49 Belcrest Rd. 06107
Bruno, Mrs. Francis; 1125 Trout Brook Dr. 06719
Buckman, Mrs. Charles A., 15 Claybar Dr. 06117
Bucknam, Mrs. Frank G., 85 Rockledge Dr. 06107
Bunce, Mrs. James W., 26 Ridgewood Dr. 06107
Burns, Mrs. John E., 10 Paxton Rd. 06107

Campbell, Mrs. Robert H., 28 Ranger La. 06107
Carey, Mrs. Thomas C., 49 Sycamore Rd. 06117
Cartland, Mrs. John E., Jr., 32 Stoner Dr. 06107
Chester, Mrs. Lewis L., Beech Tree Lane 06107
Cohn, Mrs. Samuel H., 15 Brainard Rd. 06117
Coley, Mrs. Geoffrey M., 253 Ridgewood Rd. 06107
Conroy, Mrs. John T., 46 Sunrise Hill Dr. 06107
Conway, Mrs. Edward J., 24 Mountain Terrace Rd. 06107
Crombie, Mrs. H. David, 126 Hunter Dr. 06107
Curis, Mrs. Francis T., 24 Mohawk, Dr. 06117
Curran, Mrs. Timothy L., 14 Braintree Dr. 06117

Dalton, Mrs. George R., 339 South Main 06107
D'Ambruoso, Mrs. Dominic C., 30 Glen Hollow 06117
de Chabert-Ostland, Mrs. Jean C., 1582 Asylum Ave. 06117
De Graff, Mrs. Arthur C., Jr., 160 Hunter Dr. 06107
DeMaio, Mrs. John, 71 Hunter Dr. 06117
Deming, Mrs. Edward G., 15 Bainbridge Rd. 06119
Denne, Mrs. Thomas H., 30 Outlook Ave. 06119
Denton. Mrs. Cleveland R., 23 Greenridge Lane 06107
Dion, Mrs. Asa J., 60 Webster Hill Blvd. 06107
Dobrow, Mrs. Robert, 148 Pioneer Dr. 06117
Donnelly, Mrs. John, 14 Ledyard Rd. 06117
Donovan, Mrs. William F., 798 Farmington Ave. 06119
Dougherty, Mrs. Anthony, 90 Bainbridge Rd., 06119
Dowling, Mrs. Kevin V., 36 Westmont 06117
Dunsmore, Mrs. Rembrandt H., 101 Waterside Lane 06107
Dushane, Mrs. Joseph E., 6 Highgate Lane 06107

Earle, Mrs. Lyon H., Jr., 16 Sunset Ter. 06107
Ehrlich, Mrs. Eugene L., 54 Lovelace Dr. 06117
Ellis, Mrs. William A., 79 Stoner Dr. 06107
Enowitch, Mrs. Bennett I., 8 Sycamore Rd. 06117
Ergin, Mrs. Muceddit T., 97 Cliffmore Rd. 06107

Fairlee, Mrs. Chester, 142 Steele Rd. 06107
Feeney, Mrs. Thomas F., 4 Sunset Ter. 06107
Feldman, Mrs. Paul, 40 Colony Rd. 06117
Fenney, Mrs. Philip W., 95 Meadow Lane 06107
Fierberg, Mrs. A. Arthur, 53 Brightview Dr. 06117
Fleisch, Mrs. Milton C., 49 Sulgrave Rd. 06107
Flescher, Mrs. Robert, 40 Berwyn Rd. 06107
Fortier, Mrs. Norman L., 70 Sheep Hill Dr. 06117
Fox. Mrs. George F., 8 Hooker Dr. 06107
Frank, Mrs. Ludwig M., 21 Walbridge Rd. 06119
Franklin, Mrs. John B., 61 Mountain View Dr. 06117

Ganybarini, Mrs. E. K., 19 Maiden La. 06117
Geary, Mrs. Frederick L., 23 Sunset Ter. 06107
Geary, Mrs. William, 38 Pheasant Hill Dr. 06107
George, Mrs. Anastasios, 11 Vardun Rd. 06117
Gfeller, Mrs. Robert J., 16 Berwyn Rd. 06107
Giardi, Mrs. Leo P., 94 Richmond Lane 06117
Godar, Mrs. Thomas J., 72 Blue Ridge Lane 06117
Gold, Mrs. Bertram, 73 Vardon Rd. 06117
Goldberg, Mrs. Morton H., 33 Cumberland Rd. 06119
Goldenberg, Mrs. Philip T., 95 Brewster Rd. 06117
Goldenthal. Mrs. Carol, 15 Fernridge Rd. 06107
Goldstein, Mrs. Max R., 25 Norwood Rd. 06117
Golston, Mrs. Harry, 9 Gallaudet Dr. 06107
Gordon, Mrs. Yale, 65 Griswold Dr. 06119
Gorman, Mrs. David, 199 South Main 06107
Gould, Mrs. M. Martin, 15 Ridgewood Rd. 06107
Grace, Mrs. Thomas W., 25 Paxton Rd. 06107
Graffagnino, Mrs. Paul N., 66 Uplands Dr. 06107
Grayclon, Mrs. R. James, 40 Brookside Blvd. 06107
Grayson, Mrs. Donald R., 62 Westwood Rd. 06117
Greenstein, Mrs. Saul, 44 Pilgrim Rd 06117
Grody, Mrs. Marvin H., 110 High Wood Rd. 06117
Gross, Mrs. Elliot, 58 Avondale 06117
Gross, Mrs. Norman D., 368 Fern 06119

Haines, Mrs. Robert W., 360 Westmont 06117
Haksteen, Mrs. John J., 41 Middlebrook Rd. 06119
Hall, Mrs. Francis, 48 Stoner Dr. 06107
Halligan, Mrs. Thomas J., 104 Spring La. 06107
Hamilton, Mrs. George, 43 Sulgrave 06107
Hannan, Mrs. William S., 4 Squirrel Hill Rd. 06107
Hastings, Mrs. Louis, 31 Woodland 06105
Haugh, Mrs. John D., 50 Mohawk Dr. 06117
Healey, Mrs. J. William, 89 Sunny Beach Dr. 06117
Henken, Mrs. E. Marvin, 57 Pilgrim Rd. 06117
Hickox, Mrs. Curtiss B., 30 Rosedale Rd. 06107
Himelstein, Mrs. Monroe, 10 Squirrel Hill Rd. 06107
Holtz, Mrs. Raymond S., 16 Mountain Farms Rd. 06117
Houck. Mrs. John, 6 Oxford Dr. 06107
Houlihan, Mrs. John J., 101 Montclair Dr. 06107
Hull, Mrs. Crawford, 58 Walton Dr. 06107
Hulme, Mrs. Stephen A., 9 Paxton Rd. 06107

Irving, Mrs. J. Grant, 180 Wood Pond Rd. 06107

Jeresaty, Mrs. Robert M., 36 Lakeview Dr. 06117
Johnson, Mrs. Donald W., 10 Selden Hill Dr. 06107

Kaplan, Mrs. Bernard J., 63 High Wood Rd. 06117
Kardys. Mrs. John A., 49 Pilgrim Rd. 06117
Kay, Mrs. Richard, 44 Westmost 06117
Kearney, Mrs. Maurice, 21 Cedar Ledge Rd. 06107
Keefe, Mrs. Arthur D., 122 Richmond Lane 06117
Kemler, Mrs. R. Leonard, 65 Norwood Rd. 06117
Kenny, Mrs. William J., 108 Steele Rd. 06119
Kiley, Mrs. Robert F., 332 Westmont 06117
Kingston, Mrs. Paul J., 27 Walbridge Rd. 06119
Klein, Mrs. Joseph, 779 Prospect Ave., Apt. 4 06105
Krall, Mrs. Irving H., 50 Pilgrim Rd. 06117
Krieger, Mrs. James L., 23 Glen Hollow 06117
Kugelman, Mrs. Thomas P., 19 Sunset Ter. 06107

Laakso, Mrs. William B., 48 Woodbridge Circle 06107
Lahey, Mrs. William J., 34 Montclair Dr. 06107
Lenehan, Mrs. J. Richard, 49 Rosedale Rd. 06107
Levin, Mrs. Albert E., 7 Brookside Blvd. 06107
Levy, Mrs. Benjamin, 21 Vardon Rd. 06117
Lischner, Mrs. Moses D., 3 Lawler Rd. 06117
Locke, Mrs. Harry L., 20 Woodruff Rd. 06107
Low, Mrs. Henry, 1 Mountain Farms Rd. 06107
Lublin, Mrs. Raymond D., 19 Fulton Pl. 06107

Malinconico, Mrs. Lawrence L., 200 Westmont 06117
Mancoll, Mrs. Morris M., 285 North Quaker Lane 06119
Mancoll, Mrs. William, 30 Woodland 06105
Marino, Mrs. Frank S., 126 Pioneer Dr. 06117
Markley, Mrs. D. Norman, 777 Prospect Ave. 06107
Martin, Mrs. John, 3 Arlington Rd. 06107
McCawley, Mrs. Austin 87 Pilgrim Rd. 06117

McCloskey, Mrs. Edwin M., 42 Sheep Hill Dr. 06117
McCooey, Mrs. John H., 527 Mountain Rd. 06117
McCormick, Mrs. James M., 110 Mountain Terrace Rd. 06107
McGowan, Mrs. George E., 154 Clifton Ave. 06107
Menzer, Mrs. Alexander, 87 High Ridge Rd. 06117
Meridy, Mrs. Howard, 115 Mohegan Dr. 06117
Miller, Mrs. Bennett, 46 Whetten Rd. 06117
Mittleman, Mrs. J. Arnold, 20 Lakeview Dr. 06117
Molloy, Mrs. Robert J., 29 Fulton Pl. 06107
Moloney, Mrs. David, 46 Griswold Dr. 06119
Morhardt, Mrs. Charles, 47 Midlands Dr. 06107
Morse, Mrs. Edward E., 41 Smallwood Rd. 06107
Moskowitz, Mrs. Harold, 14 Arlen Way 06117
Murphy, Mrs. John D., 55 Berwyn Rd. 06107
Myerson, Mrs. Manny, 22 Palmer Dr. 06117

Nakhoul, Mrs. Jabbour, 34 Timrow Rd. 06107
Nathanson, Mrs. Robert, 120 Lawler Rd. 06117
Nolan, Mrs. John O'L., 1 Orchard Lane 06117

O'Brien, Mrs. Frederick J., 75 Bainbridge Rd. 06119
O'Connell, Mrs. John D., 42 Fulton Pl. 06107
O'Hurley, Mrs. John, 71 Westmont 06117
O'Keefe, Mrs. David F., 93 Newport Ave. 06107
Opinsky, Mrs. Morton, 47 Mountain Farms Rd. 06117

Perkins, Mrs. Joseph A., 16 Webster Hill Blvd. 06107
Piacente, Mrs. Salvatore S., 107 Brookside Dr. 06107
Pitegoff, Mrs. Gerald I., 73 Norwood Rd. 06117
Polivy, Mrs. Charles, 44 Ferncliff Dr. 06117
Prestley, Mrs. William F., 519 Mountain Rd. 06117
Pyrtek, Mrs. L. J., 145 Walbridge Rd. 06119

Radding, Mrs. Philip, 89 Lyman Rd. 06117
Richman, Mrs. Ralph, 168 Mohawk Dr. 06117
Ridlon, Mrs. Herrick C., 14 Glendale Rd. 06107
Ritve, Mrs. Arnold, 15 Rushleigh Rd. 06117
Robinson, David, 69 High Ridge Rd. 06117
Rosenbaum, Mrs. George J., 16 Vardon Rd. 06117
Rosenberg, Mrs. Jack E., 114 Kirkwood Rd. 06117
Rosenberg, Mrs. Marvin, 65 Brewster Rd. 06117
Rosenthal, Mrs. Ernest, 17 Pine Rd. 06119
Rosenthal, Mrs. Irving I., 16 Northcliff Dr. 06117
Rossi, Mrs. Michael A., 136 Orchard Rd. 06117
Rotatori, Mrs. Eugene, 60 Berwyn Rd. 06107
Roth, Mrs. Malcolm S., 101 Cliffmore Rd. 06107
Rothstein, Mrs. Isadore, 90 Haynes Rd. 06117
Ruderman, Mrs. Mark, 54 West Normandy Dr. 06107
Ryan, Mrs. Francis J., 65 Cliffmore Rd. 06107
Ryan, Mrs. William F., 10 Walbridge Rd. 06119

Sachs, Mrs. Julius J., 22 Harvest Lane 06117
Sadowski, Mrs. Joseph S., 150 Beacon Hill Dr. 06117
Satloff, Mrs. David M., 22 Forest Hills Dr. 06117
Sayers, Mrs. John J., 2045 Boulevard 06107
Schloss, Mrs. Walter A., 31 Brookside Blvd. 06107
Schulyer, Mrs. Samuel, 304 Steele Rd. 06117
Secor, Mrs. Ralph, 446 South Quaker La. 06110
Seide, Mrs. Morris J., 31 Cumberland Rd. 06119
Seigle, Mrs. Stewart P., 28 Northfield Rd. 06107
Selcow, Mrs. Jay E., 20 Glenwood Rd. 06107
Sennett, Mrs. Edward J., 29 Scarsdale Rd. 06107
Sewall, Mrs. Sydney, 351 Ridgewood Rd. 06107
Shafer, Mrs. Myron E., 14 Fulton Pl. 06107
Sheehan, Mrs. George D., 91 Four Mile Rd. 06107
Shelton, Mrs. Philip A., 70 Norwood Rd. 06117
Shoukimas, Mrs. John, 26 Pheasant Hill Dr. 06107
Sicklick, Mrs. Elliot, 33 High Wood Rd. 06117
Silberman, Mrs. S. Joseph, 144 Haynes Rd. 06117
Smith, Mrs. Jay Donald, 11 West Ridge Dr. 06117
Smith, Mrs. Wilson Fitch, 25 Bainbridge Rd. 06119
Soares, Mrs. Manuel J., 98 Sunny Reach Dr. 06117
Spillane, Mrs. Richard J., 14 Northfield Rd. 06107
Sponzo, Mrs. James J., 81 Hunter Dr. 06107
Stack, Mrs. William J., 69 Meadow Lane 06107
Stent, Mrs. Phillip A., 50 Ridgewood Rd. 06107
Storrs, Mrs. Ralph W., 64 Orchard Rd. 06117
Sullivan, Mrs. Paul R., 8 Pilgrim Rd. 06117

Taylor, Mrs. William, 28 Pelham Rd. 06107
Teahan, Mrs. John W., 7 Hillsboro Dr. 06107
Tennant, Mrs. Robert, 30 Ten Acre Lane 06107
Thaw, Mrs. B. D., 15 Brookside Place 06107
Thomas, Mrs. John B., 14 Oxford Dr. 06107
Thompson, Mrs. Hartwell G., 184 Mountain Rd. 06107
Tripp, Mrs. William H., 120 Cliffmore Rd. 06107
Trowbridge, Mrs. Philip E., 14 Dodge Dr. 06107
Tucker, Mrs. Charles A., 7 Wintergreen Lane 06117
Tucker, Mrs. Jolyon S., 89 Brookside Dr. 06107
Turco, Mrs. Vincent J., 52 Sheep Hill Dr. 06117
Tyrrell, Mrs. David, 2 Mountain Brook Rd. 06117

Vernlund, Mrs. Robert J., 46 Sunset Farm Rd. 06107

Walker, Mrs. James E., 24 Sunset Farm 06107
Waltman, Mrs. Irving, 3 Brighton Rd. 06117
Walton, Mrs. Loftus, 64 Brenway Dr. 06117
Wardner, Mrs. LeRoy H., 64 High Farms Rd. 06107
Wawro, Mrs. N. William, 44 Walbridge Rd. 06119
Welch, Mrs. Edmund T., Jr., 5 Manor Lane 06107
Whitcomb, Mrs. Benjamin B., 38 High Farms Rd. 06107
White, Mrs. Edward, 41 Riggs Ave. 06107
White, Mrs. Kenneth H., 47 Westminster Dr. 06107
Winters, Mrs. John T., 19 Linbrook Rd. 06107
Wolfson, Mrs. S. Steven, 83 Fuller Dr. 06117
Wood, Mrs. Dwight R., 29 Braintree Dr. 06117
Wood, Mrs. Edwin C., 125 Mountain Rd. 06107
Wood, Mrs. Frank O., 28 Gloucester Lane 06107
Woodruff, Mrs. John H., 10 Sunfield Lane 06107

Zarkin, Mrs. Oscar H., 186 North Main 06107

WEST SIMSBURY 06092

LoPresti, Mrs. Daniel A., 19 Fox Den Rd.
Toomey, Mrs. James, 42 Drumlin Rd.

WETHERSFIELD 06109

Agee, Mrs. Fred B., Jr., 51 Westway
Aseltine, Mrs. Deal T., Jr., 99 Robeth Lane
Beakey, Mrs. John F., 36 Golf Rd.
Beck, Mrs. Roger S., 305 Dale Rd. 06109
Boelhouwer, Mrs. Cornelius, 359 Pine Lane
Butterfield, Mrs. Walter L., 26 Saxon Rd.
Callan, Mrs. John, 425 Coppermill Rd.
Cavalieri, Mrs. Rinaldo, 454 Highland
Curtiss, Mrs. Burr, 98 Highcrest Rd.
DePasquale, Mrs. John A., 732 Prospect
Dickson, Mrs. Charles, 490 Highland
Fisher, Mrs. Robert L., 500 Highland
Foote, Mrs. Franklin H., 300 Russell Rd.
Gallivan, Mrs. John N. 951 Ridge Rd.
Giuliano, Mrs. Sebastian, 270 Wolcott Hill Rd.
Gorman, Mrs. Arthur T., 3 Baneberry Lane
Hellijas, Mrs. Carl S., 4 River Rd.
Izard, Mrs. Mark W., 35 Broad

Johnston, Mrs. Howard J., 522 Wolcott Hill Rd.
Murphy, Mrs. Robert D., 404 Wolcott Hill Rd.
O'Brien, Mrs. E. James, 31 Surrey Dr.
Palermino, Mrs. Donato A., 78 Baneberry Lane
Pasternak, Mrs. Herbert S., 25 Farmingdale Rd.
Reed, Mrs. John F., 381 Wolcott Hill Rd. 06109
Reinfrank, Mrs. Ralph F., 208 Highland
Ryan, Mrs. William D., 200 Ox Yoke Dr.
St. John, Mrs. Nicholas E., 375 Ridge Rd.
Steege, Mrs. Theodore W., 29 Eastern Dr.
Trench, Mrs. James M., 12 Eastern Dr.
Turner, Mrs. Wallace W., 102 Clover Crest Rd.

WINDSOR 06095

Hamblin, Mrs. Wolcott, 342 Park Ave.
Mack, Mrs. Daniel, 932 Windsor Ave.
Silliman, Mrs. Warren B., P. O. Box 508, 26 Prospect

OUT-OF-COUNTY MEMBERS

Connors, Mrs. Edwin R., 25 Lester Ave., Pawcatuck, Conn. 02891
Giddings, Mrs. Lane, 170 Forest Rd., Mountain Top. Pa. 18707
Lowell, Mrs. W. Holbrook, Jr., Collamer Circle, Shelburne, Vt. 05482
Spekter, Mrs. Louis, 4915 Albemade, N.W., Washington, D. C. 20016

Litchfield County

CANAAN 06018

Sellew, Mrs. Robert, Sr., West Main
Sellew, Mrs. Robert Jr., North Elm

HARWINTON 06790

Adams, Mrs. Arthur, Scoville Hill Rd., R. F. D. 2

LITCHFIELD 06759

Samson, Mrs. Daniel, R. F. D. 2, Sweetbriar Farm

OAKVILLE 06779

Czarsty, Mrs. Joseph C., 18 Hillside Ave.

THOMASTON 06787

Russo, Mrs. Niel, 56 High
Wight, Mrs. Winfield K., 24 Goodwin Court

WINSTED 06098

Gallo, Mrs. Thomas, 1 Front
Levy, Mrs. Aaron, Wakefield Dr., Highland Lake

Middlesex County

CHESTER 06412

Nadel, Mrs. Martin, East Liberty

CLINTON 06413

Rindge, Mrs. Norman P., 147 East Main

COLCHESTER 06415

Turano, Mrs. Andrew, Cemetary Rd.

CROMWELL 06416

Adams, Mrs. Henry A., 384 Main
Grant, Mrs. Richard, 482 Main
Nelson, Mrs. Walter, 360 Main

DURHAM 06422

Chace, Mrs. Charles W., Cedar Dr.
Korn, Mrs. Francis, Jr., 88 Main
Sosa, Mrs. Juan, Carriage Dr.
Voelkening, Mrs. Burkhard W., Carriage Dr.

EAST HAMPTON 06424

Gardner, Mrs. Norman, 22 Summit

ESSEX 06426

Bardenheier, Mrs. Joseph, Hemlock Dr.
James, Mrs. Raymond, River Rd.
Lobb, Mrs. Russell A., Long Hill Rd.

HADDAM 06438

Arena, Mrs. Anthony, Meeting House Rd.
Buckley, Mrs. Willard, Oak Ridge Dr.
Craig, Mrs. G. Mansfield, Saybrook Rd.
Gorin, Mrs. Malcolm, Timms Hill Rd.
Kaufman, Mrs. Herbert, Oak Ridge Dr.
Miller, Mrs. Donald, Timms Hill Rd.

HIGGANUM 06441

Calhoun, Mrs. Hazen A., Main
Havlicek, Mrs. Joseph, Saybrook Rd.
Korab, Mrs. John J., Main
Longo, Mrs. Edward, Skunk Misery Rd.
McDowell, Mrs. Arthur, Christian Hill Rd.
Rabuffo, Mrs. Jeff, Skunk Misery Rd.

MIDDLEFIELD 06455

Fiducia, Mrs. Joseph, Rosemary Ct.

MIDDLE HADDAM 06456

Campbell-Jacobs, Mrs. Richard, Main
Clark, Mrs. Samuel, Keignley Pond Rd.

MIDDLETOWN 06457

Arafeh, Mrs. Mehadin K., 1 Harvey Dr.
Bernstein, Mrs. Alan, Maple Shade Rd.
Bertuch, Mrs. William, 16 Intown Terrace
Cerritelli, Mrs. Dominick, Flynn La.
Concannon, Mrs. Patrick, Ballfall Rd.
Crampton, Mrs. Clair B., 158 Mt. Vernon
Fischbein, Mrs. Frederic, 239 Old Mill Rd.
Frank, Mrs. Harry S., Stonegate Apts., South Main
Ganquli, Mrs. Prabhash, 251 Old Mill Rd.
Ghaussy, Mrs. Aziz, 547 Main
Grower, Mrs. Julius, 70-B Rose Circle
Harvey, Mrs. Sanford, Ballfall Rd.
Harwood, Mrs. Clarence W., 135 Old Mill Rd.
Kelly, Mrs. John F., 256 Old Mill Rd.
Kilga, Mrs. Lawrence, 15 Intown Ter.
LaBella, Mrs. Louis O., 10 Poinsettia
Lambe, Mrs. Michael, Orchard Hill Rd.
Manzi, Mrs. Joseph, 195 Old Mill Rd.
McKay, Mrs. Donald, 116 Bretton Rd.
Minor, Mrs. Lloyd, 329 Coleman Rd.
Palmieri, Mrs. Mario, 200 Coleman Rd.
Pennington, Mrs. Robert B., 779 Ridge Rd.

Perlin, Mrs. Louis, 170 Oakuff Rd.
Prins, Mrs. Sal A., 67 Old Mill Rd.
Robbins, Mrs. Kenneth, 10 Yellow-Birch Rd.
Roccapriore, Mrs. Benjamin, Olympus Parkway
Russman, Mrs. Charles, 33 Highland Ter.
Schwartz, Mrs. Philip E., 74 Lisa Lane
Shenker, Mrs. Benjamin, 46 Pine
Sherwood, Mrs. Henry, 580 Kelsey
Soreff, Mrs. Louis, 148 Margarite Rd.
Thumim, Mrs. Mark, Maple Shade Rd.
Tracy, Mrs. F. Erwin, 202 Old Mill Rd.
Vinci, Mrs. Vincent J., Randolph Rd.
Yue, Mrs. James Kar-kee, Coleman Rd.
Zavod, Mrs. Robert, 1 Yellow Birch Rd.

MOODUS 06469

Berwick, Mrs. Phillip, Plains Rd.

OLD SAYBROOK 06475

Sheehan, Mrs. Bernard, Boston Post Rd.

PORTLAND 06480

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Andrus, Mrs. Wayne, Stonegate Dr.
Ceuleman, Mrs. Cyril, 4 Hall Hill Rd.
Crowther, Mrs. Daniel, Farm La.
Dooley, Mrs. John, Michelle Dr.
Epstein, Mrs. Joseph, P. O. Box 227
Knight, Mrs. Harry C., 523 Main
Lambe, Mrs. Thomas, Scenic Dr.
Rosenbaum, Mrs. Howard, 87 William
Siberstein, Mrs. Allen, 51 Prospect
Stoane, Mrs. Leonard, 7 Clearview Dr.
Sweet, Mrs. Richard T., 15 Summer
Thomson, Mrs. A. W., 73 William
Waldman, Mrs. Arthur, Farm La.

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Gallo, Mrs. Sebastian, 18 Robeth La., Wethersfield 06109
Wright, Mrs. John C., 64 Wyllys, Manchester, 06048

New Haven County

BRANFORD 06405

Errica, Mrs. Austin, 4 Sagamore Cove Rd.
Gillson, Mrs. Reginald, Apt. 25, Cherry Hill Circle
McKeon, Mrs. James, Harbour Village 27-C
Reisman, Mrs. John P., Hearthstone, Boston Post Rd.

CHESHIRE 06410

Mannes, Mrs. Peter R., 270 Nob Hill Rd.

DERBY 06418

Filan, Mrs. James K., 17 Fairview Ter.
Narowski, Mrs. John, 153 Sentinel Hill

HAMDEN

Camilleria, Joseph, 835 Ridge Rd. 06517
Cassin, Mrs. Carl, 947 Choate Ave. 06518
Cipriano, Mrs. Anthony, 15 Eastland Rd. 06517
Coe, Mrs. Ronald E., 1727 Whitney Ave. 06514
Culotta, Mrs. Charles, 2714 Whitney Ave. 06518
Greenwald, Mrs. Willard, 1125 Ridge Rd. 06517
Harvard, Mrs. Bell Martin, Jr., 105 Spring Glen Ter. 06517
Heiger, Mrs. Arnold, 4 Hesses Rd. 06517
Jaffe, Mrs. Samuel, 35 Rodgers Rd. 06517
LaFemina, Mrs. Nicholas, 60 Dawes Ave. 06517
Lavorgna, Mrs. M. H., 92 Glen Pkwy. 06517
Levenstein, Mrs. Marvin, 1797 Whitney Ave. 06517
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Mendillo, Mrs. John J., 25 Tokeneke Dr. 06518
Olson, Mrs. Lowell, 85 River Rd. 06518
Pickett, Mrs. Lawrence, 205 Blake Rd. 06517
Radowiecki, Mrs. M. Walter, 196 Corbin Rd. 06517
Richards, Mrs. William R., 116 Brook 06514
Scholhamer, Mrs. Charles, 9 Killdeer Rd. 06517

MERIDEN 06450

Carey, Mrs. William C., 136 Eaton Ave.
Misuk, Mrs. Joseph, 111 Hillcrest Ter.
Pierson, Mrs. Louis A., 130 Bradley Ave.
Quinlan, Mrs. Raymond, 36 Winthrop Ter.

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Bizzozero, Mrs. Orpheus J., Curtis Rd.
Blain, Mrs. Claude, Central Rd.
Liao, Mrs. Sung J., Sky Line Dr.
Mascoli, Mrs. Nicholas J., 45 Briarwood Ter.
Ryan, Mrs. Sylvester, Breakneck Hill
Wihbey, Mrs. Joseph, Carriage Dr.

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Climo, Mrs. Samuel, 25 Woodside Ter. 06515
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Freedman, Mrs. Barnett, 111 Park 06511
Holly, Mrs. Marshall, 215 Stimpson Rd. 06511
Levin, Mrs. Hyman, 168 Linden 06511
Millen, Mrs. Samuel R., 135 Cleveland Rd. 06511
O'Connor, Mrs. Denis, 241 Edwards 06511
Passarelli, Mrs. Nicholas L., 2055 Chapel 06515
Petrelli, Mrs. Joseph, 157 East Rock Rd. 06511
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Weil, Mrs. Arthur, 307 St. Ronan 06511
Zuckerman, Mrs. Bernard D., 25 Beaver Hill Lane 06511

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Davey, Mrs. Lycurgus M., 1010 Hartford Tpke.
Dolinsky, Mrs. A. H., 12 Crestview Dr.
Fezza, Mrs. Andrew, 15 Leighton Ct.
Fischer, Mrs. Daniel, 22 Windsor Rd. East

Hart, Mrs. Robert W., 2233 Ridge Rd.
Hess, Mrs. Orvan, 29 Old Orchard Rd.
Kessler, Mrs. Frederick, 20 Dogwood Rd.
Morgan, Mrs. Walter, 41 Tokeneke Dr.
Parisi, Mrs. Anthony, 30 Windsor Rd.
Scheig, Mrs. Robert, 521 Quinnipiac Ave.
Solitare, Mrs. Gilbert, 108 Ridgewood Ave.
Spackman, Mrs. Thomas, 80 Forest Hill Rd.
Vegliante, Mrs. Michael, 22 Primrose Rd.

ORANGE 06477

Aguiar, Mrs. Jose, 45 Williamsburg Dr.
Allen, Mrs. Edward P., 505 Ridgeview Rd.
Brodoff, Mrs. Murray, 21 Williamsburg Dr.
Dobeny, Mrs. James J., 885 Blackberry Hollow
Fiskio, Mrs. Peter, 166 Englewood Dr.
Habib, Mrs. Nabil I., 839 Robert Treat Ext.
Holden, Mrs. Jack, 814 Grassy Hill Rd.
Kreis, Mrs. David, 42 Whitney Lane
Landau, Mrs. S. Jack, 154 Englewod Dr.
Lanzi, Mrs. Robert, 64 Hall
Manjoney, Mrs. Richard C., 760 Dennis Dr.
Milazzo, Mrs. Nicholas, 173 Englewood Dr.
Mombello, Mrs. Gary, 220 Highland Ter.
Petrillo, Mrs. Charles, 66 Derby Ave.
Rifkin, Mrs. Boris, 399 Clark Lane
Sikorski, Mrs. Jerzy, 238 Harvester Rd.
Turkalo, Mrs. J. R., 894 Orange Center Rd.
Zagraniski, Mrs. Raymond, 48 Whitney Lane

OXFORD 06483

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SHELTON 06484

Roach, Mrs. Donald, 40 Judson Circle
West, Mrs. William, 147 Huntington

SOUTHBURY 06488

Summa, Mrs. John, Bucks Hill Rd.

WALLINGFORD 06492

Carrozzella, Mrs. John, 222 N. Whittlesey Ave.
Fazzone, Mrs. Philip, 290 Cook Hill Rd.

WATERBURY

Atkins, Mrs. S. M., 81 E. Ridge Dr. 06708
Blank, Mrs. Samuel, Southwest Rd. 06708
Buckley, Mrs. Michael, 1100 Baldwin 06705
Burnham, Mrs. Bernard, 70 Tower Rd. 06710
Cappeletti, Mrs. Joseph, 58 Mayfield Rd. 06708
Crupi, Mrs. Claudio, 911 Country Club Rd. 06708
Depetrillo, Mrs. Bart, 619 Willow 06710
Eslami, Mrs. Mehdi, 139 Eastfield Rd. 06708
Koleshko, Mrs. Lawrence, 1022 Bunker Hill Ave. 06708
Lenkowski, Mrs. William, 107 West Ridge Dr. 06708
Luria, Mrs. Sidney, 124 Avalon Circle 06710
Mayo, Mrs. Elliott Russell, 129 Prospect 06702
Reed, Mrs. David, 6 Maybrook Rd. 06708
Reynolds, Mrs. Joseph, 185 Pine 06710
Santapietro, Mrs. Olindo, 241 Forest Ridge Rd. 06708
Segall, Mrs. Edward, 162 Southwind Rd. 06708
Sullivan, Mrs. Arthur, 493 Willow 06710
Teiger, Mrs. Paul, 252 Peach Orchard Rd. 06708
Tormo, Mrs. Vincent, 76 Robinwood Ave. 06708
Traurig, Mrs. Allen, 66 Avalon Circle 06710
Veiga, Mrs. A. S., 55 Eastfield Rd. 06708
Weisberg, Mrs. H. E., 50 Gaylord Dr. 06710
Whalley, Mrs. Evan J., 720 Baldwin 06706
Yanetz, Mrs. Louis M., 184 Columbia Blvd. 06710

WATERTOWN 06795

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Milici, Mrs. John J., 354 Campbell Ave.
Tierney, Mrs. Lawrence, 246 Elm

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DeMarchena, Mrs. Julio, 1 Farmingbury Rd.

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Arons, Mrs. Marvin, Hunting Hill Rd.
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Berneike, Mrs. Robert, Hickory Rd.
Brochin, Mrs. Malcolm, Hemlock Hollow Rd.
Davidson, Mrs. Alan, 15 Edge Hill Dr.
Delpizzo, Mrs. A., 14 Dickinson Dr.
Fenn, Mrs. John, Hemlock Hollow Rd.
Frechette, Mrs. Eugene, 1188 Racebrook Rd.
Gagliardi, Mrs. Joseph, Jr., Forest Glen Dr.
Goetsch, Mrs. John, Cleft Rock Lane
Ingenito, Mrs. Gabriel, 181 Center Rd.
Kra, Mrs. Siegfried, Pleasant Hill Rd.
Laubstein, Mrs. Melvin, Richard Sweet Dr.
Lawson, Mrs. J. P., Brewood Dr.
Mattie, Mrs. L. R. Dogwood Circle
Petrie, Mrs. Stewart J., 16 Wolf Tree Dr.
Polayes, Mrs. Irving, 49 North Racebrook Rd.
Savin, Mrs. Ronald, Edgehill Dr.
Schioppo, Mrs. Dominic B., 46 Newton Rd.
Vestal, Mrs. Paul, Amity Rd.
Winer, Mrs. Paul Tumblebrook Rd.
Wirth, Mrs. Michael N., Pine Ridge Rd.

OUT OF COUNTY

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New London County

BALTIC 06330

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COLCHESTER 06415

Conrad, Mrs. Carl, R .F. D. 2, Palmer Rd.

EAST LYME 06333

Saxe, Mrs. Louis, 3 Colonial Dr.

FITCHVILLE 06334

Gager, Mrs. John J., R. F. D, Gager Rd.

GROTON 06340

Brown, Mrs. Walter, 91 Broad

LYME 06371

Cavicke, Mrs. David, Joshua Rd.
Ely, Mrs. Julian, R. F. D. 2

NEW LONDON 06320

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Beatman, Mrs. Bernard, 16 Niles Hill Rd.
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Scholz, Mrs. Dieter, 62 Ledge Rock Rd.

NORTH FRANKLIN 06254

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Albamonti, Mrs. Mario J., 46 Rockwell
Archambault, Mrs. Henry, 18 Wayne Dr.
Barrett, Mrs. Frederick, 256 Broadway Ave.
Bergendahl, Mrs. H., 17 Huntington Lane
Betten, Mrs. Michael, 157 McKinley Ave.
Bolstad, Mrs. Ralph, Norwich State Hospital
Coletti, Mrs. Lawrence, 34 Gulliver Circle
Costa, Mrs. Pasquale, 44 Gulliver Circle
Cranston, Mrs. Robert J., 43 Ox Hill Rd.
DeGroot, Mrs. Theodore, 27 Scotland Rd.
Edgar, Mrs. Malcolm S., 410 Washington
Greene, Mrs. Leonard, 260 Washington St.
Griffin, Mrs. Clement, 22 Briar Hill Rd.
Guss, Mrs. Louis, 59 Sachem Rd.
Harkins, Mrs. James A., 96 Case
Joseph, Mrs. Julien L., Scotland Rd., R.F.D. 4
Kalams, Mrs. Zanis, 74 Case
Katz, Mrs. Morris E., 24 Broad
Kelleher, Mrs. James, 403 Washington
Kerrigan, Mrs. Robert, 20 Dudley
Kropp, Mrs. Peter, 4 Dellwood Rd.
Mahoney, Mrs. Joseph, 74 Ox Hill Rd.
Mandell, Mrs. Harvey, Indian Spring La.
Martin, Mrs. John, 28 Montgomery Lane
Martin, Mrs. Morgan, Box 508, Norwich State Hospital
Masterson, Mrs. Thomas, 23 East Town
McKeon, Mrs. William, 18 Sherwood Lane
Oppenheimer, Mrs. Kurt, 8 Dupont Lane
Parthenis, Mrs. Alex, Box 508, Norwich Hospital
Phillips, Mrs. Nicholas T., 14 Montgomery Lane
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UNCASVILLE 06382

Rasmussen, Mrs. Norman, 92 Depot Rd.

WATERFORD 06385

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Behringer, Mrs. Frederick, 14 Susan Ter.
Coulson, Mrs. Louis, 58 Ridgewood Ave.
Dyer, Mrs. Charles F., 5 Showandasee Ave.
Henkle, Mrs. Robert, 170 Niles Hill Rd.
Kim, Mrs. Albert, 11 Trumbull Rd.
Marchand, Mrs. Gilles, 3 Jonathan Law Ct.
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Windham County

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Valentine, Mrs. Bruce Roberts

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COVENTRY 06238

Bowen, Mrs. Robert Phillip, High
Doyle, Mrs. Fred, South River Rd.

DANIELSON 06239

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Laakso, Mrs. Andrew O., 213 North Main
Robinson, Mrs. Lavius, Jr., P.O. Box 610
Weigel, Mrs. Stanley Joseph, 53½ Broad

DAYVILLE 06241

Dufort, Mrs. Robert, R. F. D. 1, Box 724
Raheb, Mrs. Edmond, R.F.D. 1, Box 702

EAST WOODSTOCK 06244

Klare, Mrs. Rudolph Emil, Route 169

JEWETT CITY 06351

Kennedy, Mrs. George L., 5 Maple

MANSFIELD CENTER 06250

Bopp, Mrs. Raymond P., Wormwood Hill Rd.

MOOSUP 06354

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Phillips, Mrs. Karl T., 8 Pleasant
Shepard, Mrs. William Mac, R.F.D. No. 2

SCOTLAND 06264

Glugover, Mrs. Donald, P. O. Box 68

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Maurer, Mrs. William S., Babcock Hill Rd.

STORRS 06268

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Gilman, Mrs. Ralph L. 3 Willowbrook Rd.
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THOMPSON 06277

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Waldron, Mrs. Sherman, R. F. D. 1, Box 2

WILLIMANTIC 06226

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Gibson, Mrs. Luther W., R.F.D. No. 4
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Roch, Mrs. George E., R.F.D. No. 3, Box 417
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Sandler, Mrs. Melvin, 282 Church
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Spector, Mrs. Nathan, 329 B, Roanoke Ave.
Vernon, Mrs. Sidney, 108 Birch

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Arnold, Mrs. Morton, Windham Center
Gillcash, Mrs. Robert, S., Box 42 Windham Center
Sandler, Mrs. Gerald F., Box 115, Windham Center
Whalen, Mrs. William, Windham Center

WOODSTOCK 06281

Bates, Mrs. David
Diaz, Mrs. Arturo, Route 1, Box 113

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Herbert, Mrs. Earl Avery, 162 Ferguson Rd., Manchester, Conn. 06040

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